In[1]:=
```
Series[x / (1 - Exp[-x]), {x, 0, 8}]
```

Out[1]= $$1+\frac{x}{2}+\frac{x^2}{12}-\frac{x^4}{720}+\frac{x^6}{30240}-\frac{x^8}{1209600}+O[x]^9$$

In[2]:=
```
p = 1 + a / 2 + a ^ 2 / 12 - a ^ 4 / 720 + a ^ 6 / 30240 - a ^ 8 / 1209600
```

Out[2]= $$1+\frac{a}{2}+\frac{a^2}{12}-\frac{a^4}{720}+\frac{a^6}{30240}-\frac{a^8}{1209600}$$

In[3]:=
```
Expand[(p /. {a → b}) * (p /. {a → c})]
```

Out[3]= $$1+\frac{b}{2}+\frac{b^2}{12}-\frac{b^4}{720}+\frac{b^6}{30240}-\frac{b^8}{1209600}+\frac{c}{2}+\frac{b\,c}{4}+\frac{b^2\,c}{24}-\frac{b^4\,c}{1440}+\frac{b^6\,c}{60480}-\frac{b^8\,c}{2419200}+\frac{c^2}{12}+\frac{b\,c^2}{24}+\frac{b^2\,c^2}{144}-\frac{b^4\,c^2}{8640}+\frac{b^6\,c^2}{362880}-\frac{b^8\,c^2}{14515200}-\frac{c^4}{720}-\frac{b\,c^4}{1440}-\frac{b^2\,c^4}{8640}+\frac{b^4\,c^4}{518400}-\frac{b^6\,c^4}{21772800}+\frac{b^8\,c^4}{870912000}+\frac{c^6}{30240}+\frac{b\,c^6}{60480}+\frac{b^2\,c^6}{362880}-\frac{b^4\,c^6}{21772800}+\frac{b^6\,c^6}{914457600}-\frac{b^8\,c^6}{36578304000}-\frac{c^8}{1209600}-\frac{b\,c^8}{2419200}-\frac{b^2\,c^8}{14515200}+\frac{b^4\,c^8}{870912000}-\frac{b^6\,c^8}{36578304000}+\frac{b^8\,c^8}{1463132160000}$$

In[4]:=
```
var = {b, c}
```

Out[4]= $\{b, c\}$

In[5]:=
```
q = FromCoefficientRules[
  Select[CoefficientRules[%3, var], Total@#[[1]] ≤ 8 &], var]
```

Out[5]= $$1+\frac{b}{2}+\frac{b^2}{12}-\frac{b^4}{720}+\frac{b^6}{30240}-\frac{b^8}{1209600}+\frac{c}{2}+\frac{b\,c}{4}+\frac{b^2\,c}{24}-\frac{b^4\,c}{1440}+\frac{b^6\,c}{60480}+\frac{c^2}{12}+\frac{b\,c^2}{24}+\frac{b^2\,c^2}{144}-\frac{b^4\,c^2}{8640}+\frac{b^6\,c^2}{362880}-\frac{c^4}{720}-\frac{b\,c^4}{1440}-\frac{b^2\,c^4}{8640}+\frac{b^4\,c^4}{518400}+\frac{c^6}{30240}+\frac{b\,c^6}{60480}+\frac{b^2\,c^6}{362880}-\frac{c^8}{1209600}$$

In[6]:=
```
q1 = Expand[q /. {b → d, c → e}]
```

Out[6]= $$1+\frac{d}{2}+\frac{d^2}{12}-\frac{d^4}{720}+\frac{d^6}{30240}-\frac{d^8}{1209600}+\frac{e}{2}+\frac{d\,e}{4}+\frac{d^2\,e}{24}-\frac{d^4\,e}{1440}+\frac{d^6\,e}{60480}+\frac{e^2}{12}+\frac{d\,e^2}{24}+\frac{d^2\,e^2}{144}-\frac{d^4\,e^2}{8640}+\frac{d^6\,e^2}{362880}-\frac{e^4}{720}-\frac{d\,e^4}{1440}-\frac{d^2\,e^4}{8640}+\frac{d^4\,e^4}{518400}+\frac{e^6}{30240}+\frac{d\,e^6}{60480}+\frac{d^2\,e^6}{362880}-\frac{e^8}{1209600}$$

In[7]:=
```
q2 = Expand[q /. {b → f, c → g}]
```

Out[7]= $$1+\frac{f}{2}+\frac{f^2}{12}-\frac{f^4}{720}+\frac{f^6}{30240}-\frac{f^8}{1209600}+\frac{g}{2}+\frac{f\,g}{4}+\frac{f^2\,g}{24}-\frac{f^4\,g}{1440}+\frac{f^6\,g}{60480}+\frac{g^2}{12}+\frac{f\,g^2}{24}+\frac{f^2\,g^2}{144}-\frac{f^4\,g^2}{8640}+\frac{f^6\,g^2}{362880}-\frac{g^4}{720}-\frac{f\,g^4}{1440}-\frac{f^2\,g^4}{8640}+\frac{f^4\,g^4}{518400}+\frac{g^6}{30240}+\frac{f\,g^6}{60480}+\frac{f^2\,g^6}{362880}-\frac{g^8}{1209600}$$

In[8]:=
```
q3 = p /. {a → h}
```

Out[8]= $$1+\frac{h}{2}+\frac{h^2}{12}-\frac{h^4}{720}+\frac{h^6}{30240}-\frac{h^8}{1209600}$$

In[9]:=
```
q4 = p * q * q3
```

Out[9]=
$$\left(1+\frac{a}{2}+\frac{a^2}{12}-\frac{a^4}{720}+\frac{a^6}{30\,240}-\frac{a^8}{1\,209\,600}\right)\left(1+\frac{b}{2}+\frac{b^2}{12}-\frac{b^4}{720}+\frac{b^6}{30\,240}-\frac{b^8}{1\,209\,600}+\frac{c}{2}+\frac{b\,c}{4}+\frac{b^2\,c}{24}-\frac{b^4\,c}{1440}+\frac{b^6\,c}{60\,480}+\frac{c^2}{12}+\frac{b\,c^2}{24}+\frac{b^2\,c^2}{144}-\frac{b^4\,c^2}{8640}+\frac{b^6\,c^2}{362\,880}-\frac{c^4}{720}-\frac{b\,c^4}{1440}-\frac{b^2\,c^4}{8640}+\frac{b^4\,c^4}{518\,400}+\frac{c^6}{30\,240}+\frac{b\,c^6}{60\,480}+\frac{b^2\,c^6}{362\,880}-\frac{c^8}{1\,209\,600}\right)\left(1+\frac{h}{2}+\frac{h^2}{12}-\frac{h^4}{720}+\frac{h^6}{30\,240}-\frac{h^8}{1\,209\,600}\right)$$

In[10]:=
```
q5 = q1 * q2
```

Out[10]=
$$\left(1+\frac{d}{2}+\frac{d^2}{12}-\frac{d^4}{720}+\frac{d^6}{30\,240}-\frac{d^8}{1\,209\,600}+\frac{e}{2}+\frac{d\,e}{4}+\frac{d^2\,e}{24}-\frac{d^4\,e}{1440}+\frac{d^6\,e}{60\,480}+\frac{e^2}{12}+\frac{d\,e^2}{24}+\frac{d^2\,e^2}{144}-\frac{d^4\,e^2}{8640}+\frac{d^6\,e^2}{362\,880}-\frac{e^4}{720}-\frac{d\,e^4}{1440}-\frac{d^2\,e^4}{8640}+\frac{d^4\,e^4}{518\,400}+\frac{e^6}{30\,240}+\frac{d\,e^6}{60\,480}+\frac{d^2\,e^6}{362\,880}-\frac{e^8}{1\,209\,600}\right)\left(1+\frac{f}{2}+\frac{f^2}{12}-\frac{f^4}{720}+\frac{f^6}{30\,240}-\frac{f^8}{1\,209\,600}+\frac{g}{2}+\frac{f\,g}{4}+\frac{f^2\,g}{24}-\frac{f^4\,g}{1440}+\frac{f^6\,g}{60\,480}+\frac{g^2}{12}+\frac{f\,g^2}{24}+\frac{f^2\,g^2}{144}-\frac{f^4\,g^2}{8640}+\frac{f^6\,g^2}{362\,880}-\frac{g^4}{720}-\frac{f\,g^4}{1440}-\frac{f^2\,g^4}{8640}+\frac{f^4\,g^4}{518\,400}+\frac{g^6}{30\,240}+\frac{f\,g^6}{60\,480}+\frac{f^2\,g^6}{362\,880}-\frac{g^8}{1\,209\,600}\right)$$

In[11]:=
```
var1 = {a, b, c, h}
```

Out[11]=
```
{a, b, c, h}
```

In[12]:=
```
var2 = {d, e, f, g}
```

Out[12]=
```
{d, e, f, g}
```

In[13]:=
```
q6 = FromCoefficientRules[
  Select[CoefficientRules[q4, var1], Total@#[[1]] ≤ 8 &], var1]
```

Out[13]=
$$1+\frac{a}{2}+\frac{a^2}{12}-\frac{a^4}{720}+\frac{a^6}{30\,240}-\frac{a^8}{1\,209\,600}+\frac{b}{2}+\frac{a\,b}{4}+\frac{a^2\,b}{24}-\frac{a^4\,b}{1440}+\frac{a^6\,b}{60\,480}+\frac{b^2}{12}+\frac{a\,b^2}{24}+\frac{a^2\,b^2}{144}-\frac{a^4\,b^2}{8640}+\frac{a^6\,b^2}{362\,880}-\frac{b^4}{720}-\frac{a\,b^4}{1440}-\frac{a^2\,b^4}{8640}+\frac{a^4\,b^4}{518\,400}+\frac{b^6}{30\,240}+\frac{a\,b^6}{60\,480}+\frac{a^2\,b^6}{362\,880}-\frac{b^8}{1\,209\,600}+\frac{c}{2}+\frac{a\,c}{4}+\frac{a^2\,c}{24}-\frac{a^4\,c}{1440}+\frac{a^6\,c}{60\,480}+\frac{b\,c}{4}+\frac{a\,b\,c}{8}+\frac{1}{48}a^2\,b\,c-\frac{a^4\,b\,c}{2880}+\frac{a^6\,b\,c}{120\,960}+\frac{b^2\,c}{24}+\frac{1}{48}a\,b^2\,c+\frac{1}{288}a^2\,b^2\,c-\frac{a^4\,b^2\,c}{17\,280}-\frac{b^4\,c}{1440}-\frac{a\,b^4\,c}{2880}-\frac{a^2\,b^4\,c}{17\,280}+\frac{b^6\,c}{60\,480}+\frac{a\,b^6\,c}{120\,960}+\frac{c^2}{12}+\frac{a\,c^2}{24}+\frac{a^2\,c^2}{144}-\frac{a^4\,c^2}{8640}+\frac{a^6\,c^2}{362\,880}+\frac{b\,c^2}{24}+\frac{1}{48}a\,b\,c^2+$$

$$\frac{1}{288} a^2 b c^2 - \frac{a^4 b c^2}{17280} + \frac{b^2 c^2}{144} + \frac{1}{288} a b^2 c^2 + \frac{a^2 b^2 c^2}{1728} - \frac{a^4 b^2 c^2}{103680} - \frac{b^4 c^2}{8640} - \frac{a b^4 c^2}{17280} -$$
$$\frac{a^2 b^4 c^2}{103680} + \frac{b^6 c^2}{362880} - \frac{c^4}{720} - \frac{a c^4}{1440} - \frac{a^2 c^4}{8640} + \frac{a^4 c^4}{518400} - \frac{b c^4}{1440} - \frac{a b c^4}{2880} - \frac{a^2 b c^4}{17280} - \frac{b^2 c^4}{8640} -$$
$$\frac{a b^2 c^4}{17280} - \frac{a^2 b^2 c^4}{103680} + \frac{b^4 c^4}{518400} + \frac{c^6}{30240} + \frac{a c^6}{60480} + \frac{a^2 c^6}{362880} + \frac{b c^6}{60480} + \frac{a b c^6}{120960} +$$
$$\frac{b^2 c^6}{362880} - \frac{c^8}{1209600} + \frac{h}{2} + \frac{a h}{4} + \frac{a^2 h}{24} - \frac{a^4 h}{1440} + \frac{a^6 h}{60480} + \frac{b h}{4} + \frac{a b h}{8} + \frac{1}{48} a^2 b h -$$
$$\frac{a^4 b h}{2880} + \frac{a^6 b h}{120960} + \frac{b^2 h}{24} + \frac{1}{48} a b^2 h + \frac{1}{288} a^2 b^2 h - \frac{a^4 b^2 h}{17280} - \frac{b^4 h}{1440} - \frac{a b^4 h}{2880} - \frac{a^2 b^4 h}{17280} +$$
$$\frac{b^6 h}{60480} + \frac{a b^6 h}{120960} + \frac{c h}{4} + \frac{a c h}{8} + \frac{1}{48} a^2 c h - \frac{a^4 c h}{2880} + \frac{a^6 c h}{120960} + \frac{b c h}{8} + \frac{1}{16} a b c h +$$
$$\frac{1}{96} a^2 b c h - \frac{a^4 b c h}{5760} + \frac{1}{48} b^2 c h + \frac{1}{96} a b^2 c h + \frac{1}{576} a^2 b^2 c h - \frac{a^4 b^2 c h}{34560} - \frac{b^4 c h}{2880} -$$
$$\frac{a b^4 c h}{5760} - \frac{a^2 b^4 c h}{34560} + \frac{b^6 c h}{120960} + \frac{c^2 h}{24} + \frac{1}{48} a c^2 h + \frac{1}{288} a^2 c^2 h - \frac{a^4 c^2 h}{17280} + \frac{1}{48} b c^2 h +$$
$$\frac{1}{96} a b c^2 h + \frac{1}{576} a^2 b c^2 h - \frac{a^4 b c^2 h}{34560} + \frac{1}{288} b^2 c^2 h + \frac{1}{576} a b^2 c^2 h + \frac{a^2 b^2 c^2 h}{3456} -$$
$$\frac{b^4 c^2 h}{17280} - \frac{a b^4 c^2 h}{34560} - \frac{c^4 h}{1440} - \frac{a c^4 h}{2880} - \frac{a^2 c^4 h}{17280} - \frac{b c^4 h}{2880} - \frac{a b c^4 h}{5760} - \frac{a^2 b c^4 h}{34560} - \frac{b^2 c^4 h}{17280} -$$
$$\frac{a b^2 c^4 h}{34560} + \frac{c^6 h}{60480} + \frac{a c^6 h}{120960} + \frac{b c^6 h}{120960} + \frac{h^2}{12} + \frac{a h^2}{24} + \frac{a^2 h^2}{144} - \frac{a^4 h^2}{8640} + \frac{a^6 h^2}{362880} + \frac{b h^2}{24} +$$
$$\frac{1}{48} a b h^2 + \frac{1}{288} a^2 b h^2 - \frac{a^4 b h^2}{17280} + \frac{b^2 h^2}{144} + \frac{1}{288} a b^2 h^2 + \frac{a^2 b^2 h^2}{1728} - \frac{a^4 b^2 h^2}{103680} - \frac{b^4 h^2}{8640} -$$
$$\frac{a b^4 h^2}{17280} - \frac{a^2 b^4 h^2}{103680} + \frac{b^6 h^2}{362880} + \frac{c h^2}{24} + \frac{1}{48} a c h^2 + \frac{1}{288} a^2 c h^2 - \frac{a^4 c h^2}{17280} + \frac{1}{48} b c h^2 +$$
$$\frac{1}{96} a b c h^2 + \frac{1}{576} a^2 b c h^2 - \frac{a^4 b c h^2}{34560} + \frac{1}{288} b^2 c h^2 + \frac{1}{576} a b^2 c h^2 + \frac{a^2 b^2 c h^2}{3456} -$$
$$\frac{b^4 c h^2}{17280} - \frac{a b^4 c h^2}{34560} + \frac{c^2 h^2}{144} + \frac{1}{288} a c^2 h^2 + \frac{a^2 c^2 h^2}{1728} - \frac{a^4 c^2 h^2}{103680} + \frac{1}{288} b c^2 h^2 +$$
$$\frac{1}{576} a b c^2 h^2 + \frac{a^2 b c^2 h^2}{3456} + \frac{b^2 c^2 h^2}{1728} + \frac{a b^2 c^2 h^2}{3456} + \frac{a^2 b^2 c^2 h^2}{20736} - \frac{b^4 c^2 h^2}{103680} - \frac{c^4 h^2}{8640} -$$
$$\frac{a c^4 h^2}{17280} - \frac{a^2 c^4 h^2}{103680} - \frac{b c^4 h^2}{17280} - \frac{a b c^4 h^2}{34560} - \frac{b^2 c^4 h^2}{103680} + \frac{c^6 h^2}{362880} - \frac{h^4}{720} - \frac{a h^4}{1440} - \frac{a^2 h^4}{8640} +$$
$$\frac{a^4 h^4}{518400} - \frac{b h^4}{1440} - \frac{a b h^4}{2880} - \frac{a^2 b h^4}{17280} - \frac{b^2 h^4}{8640} - \frac{a b^2 h^4}{17280} - \frac{a^2 b^2 h^4}{103680} + \frac{b^4 h^4}{518400} - \frac{c h^4}{1440} -$$
$$\frac{a c h^4}{2880} - \frac{a^2 c h^4}{17280} - \frac{b c h^4}{2880} - \frac{a b c h^4}{5760} - \frac{a^2 b c h^4}{34560} - \frac{b^2 c h^4}{17280} - \frac{a b^2 c h^4}{34560} - \frac{c^2 h^4}{8640} - \frac{a c^2 h^4}{17280} -$$
$$\frac{a^2 c^2 h^4}{103680} - \frac{b c^2 h^4}{17280} - \frac{a b c^2 h^4}{34560} - \frac{b^2 c^2 h^4}{103680} + \frac{c^4 h^4}{518400} + \frac{h^6}{30240} + \frac{a h^6}{60480} + \frac{a^2 h^6}{362880} +$$
$$\frac{b h^6}{60480} + \frac{a b h^6}{120960} + \frac{b^2 h^6}{362880} + \frac{c h^6}{60480} + \frac{a c h^6}{120960} + \frac{b c h^6}{120960} + \frac{c^2 h^6}{362880} - \frac{h^8}{1209600}$$

In[14]:=
```
q7 = FromCoefficientRules[
  Select[CoefficientRules[q5, var2], Total@#[[1]] ≤ 8 &], var2]
```

Out[14]=

$$1+\frac{d}{2}+\frac{d^2}{12}-\frac{d^4}{720}+\frac{d^6}{30240}-\frac{d^8}{1209600}+\frac{e}{2}+\frac{d\,e}{4}+\frac{d^2\,e}{24}-\frac{d^4\,e}{1440}+\frac{d^6\,e}{60480}+\frac{e^2}{12}+$$
$$\frac{d\,e^2}{24}+\frac{d^2\,e^2}{144}-\frac{d^4\,e^2}{8640}+\frac{d^6\,e^2}{362880}-\frac{e^4}{720}-\frac{d\,e^4}{1440}-\frac{d^2\,e^4}{8640}+\frac{d^4\,e^4}{518400}+\frac{e^6}{30240}+\frac{d\,e^6}{60480}+$$
$$\frac{d^2\,e^6}{362880}-\frac{e^8}{1209600}+\frac{f}{2}+\frac{d\,f}{4}+\frac{d^2\,f}{24}-\frac{d^4\,f}{1440}+\frac{d^6\,f}{60480}+\frac{e\,f}{4}+\frac{d\,e\,f}{8}+\frac{1}{48}\,d^2\,e\,f-$$
$$\frac{d^4\,e\,f}{2880}+\frac{d^6\,e\,f}{120960}+\frac{e^2\,f}{24}+\frac{1}{48}\,d\,e^2\,f+\frac{1}{288}\,d^2\,e^2\,f-\frac{d^4\,e^2\,f}{17280}-\frac{e^4\,f}{1440}-\frac{d\,e^4\,f}{2880}-$$
$$\frac{d^2\,e^4\,f}{17280}+\frac{e^6\,f}{60480}+\frac{d\,e^6\,f}{120960}+\frac{f^2}{12}+\frac{d\,f^2}{24}+\frac{d^2\,f^2}{144}-\frac{d^4\,f^2}{8640}+\frac{d^6\,f^2}{362880}+\frac{e\,f^2}{24}+\frac{1}{48}\,d\,e\,f^2+$$
$$\frac{1}{288}\,d^2\,e\,f^2-\frac{d^4\,e\,f^2}{17280}+\frac{e^2\,f^2}{144}+\frac{1}{288}\,d\,e^2\,f^2+\frac{d^2\,e^2\,f^2}{1728}-\frac{d^4\,e^2\,f^2}{103680}-\frac{e^4\,f^2}{8640}-\frac{d\,e^4\,f^2}{17280}-$$
$$\frac{d^2\,e^4\,f^2}{103680}+\frac{e^6\,f^2}{362880}-\frac{f^4}{720}-\frac{d\,f^4}{1440}-\frac{d^2\,f^4}{8640}+\frac{d^4\,f^4}{518400}-\frac{e\,f^4}{1440}-\frac{d\,e\,f^4}{2880}-\frac{d^2\,e\,f^4}{17280}-\frac{e^2\,f^4}{8640}-$$
$$\frac{d\,e^2\,f^4}{17280}-\frac{d^2\,e^2\,f^4}{103680}+\frac{e^4\,f^4}{518400}+\frac{f^6}{30240}+\frac{d\,f^6}{60480}+\frac{d^2\,f^6}{362880}+\frac{e\,f^6}{60480}+\frac{d\,e\,f^6}{120960}+$$
$$\frac{e^2\,f^6}{362880}-\frac{f^8}{1209600}+\frac{g}{2}+\frac{d\,g}{4}+\frac{d^2\,g}{24}-\frac{d^4\,g}{1440}+\frac{d^6\,g}{60480}+\frac{e\,g}{4}+\frac{d\,e\,g}{8}+\frac{1}{48}\,d^2\,e\,g-$$
$$\frac{d^4\,e\,g}{2880}+\frac{d^6\,e\,g}{120960}+\frac{e^2\,g}{24}+\frac{1}{48}\,d\,e^2\,g+\frac{1}{288}\,d^2\,e^2\,g-\frac{d^4\,e^2\,g}{17280}-\frac{e^4\,g}{1440}-\frac{d\,e^4\,g}{2880}-\frac{d^2\,e^4\,g}{17280}+$$
$$\frac{e^6\,g}{60480}+\frac{d\,e^6\,g}{120960}+\frac{f\,g}{4}+\frac{d\,f\,g}{8}+\frac{1}{48}\,d^2\,f\,g-\frac{d^4\,f\,g}{2880}+\frac{d^6\,f\,g}{120960}+\frac{e\,f\,g}{8}+\frac{1}{16}\,d\,e\,f\,g+$$
$$\frac{1}{96}\,d^2\,e\,f\,g-\frac{d^4\,e\,f\,g}{5760}+\frac{1}{48}\,e^2\,f\,g+\frac{1}{96}\,d\,e^2\,f\,g+\frac{1}{576}\,d^2\,e^2\,f\,g-\frac{d^4\,e^2\,f\,g}{34560}-\frac{e^4\,f\,g}{2880}-$$
$$\frac{d\,e^4\,f\,g}{5760}-\frac{d^2\,e^4\,f\,g}{34560}+\frac{e^6\,f\,g}{120960}+\frac{f^2\,g}{24}+\frac{1}{48}\,d\,f^2\,g+\frac{1}{288}\,d^2\,f^2\,g-\frac{d^4\,f^2\,g}{17280}+\frac{1}{48}\,e\,f^2\,g+$$
$$\frac{1}{96}\,d\,e\,f^2\,g+\frac{1}{576}\,d^2\,e\,f^2\,g-\frac{d^4\,e\,f^2\,g}{34560}+\frac{1}{288}\,e^2\,f^2\,g+\frac{1}{576}\,d\,e^2\,f^2\,g+\frac{d^2\,e^2\,f^2\,g}{3456}-$$
$$\frac{e^4\,f^2\,g}{17280}-\frac{d\,e^4\,f^2\,g}{34560}-\frac{f^4\,g}{1440}-\frac{d\,f^4\,g}{2880}-\frac{d^2\,f^4\,g}{17280}-\frac{e\,f^4\,g}{2880}-\frac{d\,e\,f^4\,g}{5760}-\frac{d^2\,e\,f^4\,g}{34560}-\frac{e^2\,f^4\,g}{17280}-$$
$$\frac{d\,e^2\,f^4\,g}{34560}+\frac{f^6\,g}{60480}+\frac{d\,f^6\,g}{120960}+\frac{e\,f^6\,g}{120960}+\frac{g^2}{12}+\frac{d\,g^2}{24}+\frac{d^2\,g^2}{144}-\frac{d^4\,g^2}{8640}+\frac{d^6\,g^2}{362880}+\frac{e\,g^2}{24}+$$
$$\frac{1}{48}\,d\,e\,g^2+\frac{1}{288}\,d^2\,e\,g^2-\frac{d^4\,e\,g^2}{17280}+\frac{e^2\,g^2}{144}+\frac{1}{288}\,d\,e^2\,g^2+\frac{d^2\,e^2\,g^2}{1728}-\frac{d^4\,e^2\,g^2}{103680}-\frac{e^4\,g^2}{8640}-$$
$$\frac{d\,e^4\,g^2}{17280}-\frac{d^2\,e^4\,g^2}{103680}+\frac{e^6\,g^2}{362880}+\frac{f\,g^2}{24}+\frac{1}{48}\,d\,f\,g^2+\frac{1}{288}\,d^2\,f\,g^2-\frac{d^4\,f\,g^2}{17280}+\frac{1}{48}\,e\,f\,g^2+$$
$$\frac{1}{96}\,d\,e\,f\,g^2+\frac{1}{576}\,d^2\,e\,f\,g^2-\frac{d^4\,e\,f\,g^2}{34560}+\frac{1}{288}\,e^2\,f\,g^2+\frac{1}{576}\,d\,e^2\,f\,g^2+\frac{d^2\,e^2\,f\,g^2}{3456}-$$
$$\frac{e^4\,f\,g^2}{17280}-\frac{d\,e^4\,f\,g^2}{34560}+\frac{f^2\,g^2}{144}+\frac{1}{288}\,d\,f^2\,g^2+\frac{d^2\,f^2\,g^2}{1728}-\frac{d^4\,f^2\,g^2}{103680}+\frac{1}{288}\,e\,f^2\,g^2+$$

$$\frac{1}{576} d e f^2 g^2 + \frac{d^2 e f^2 g^2}{3456} + \frac{e^2 f^2 g^2}{1728} + \frac{d e^2 f^2 g^2}{3456} + \frac{d^2 e^2 f^2 g^2}{20736} - \frac{e^4 f^2 g^2}{103680} - \frac{f^4 g^2}{8640} -$$
$$\frac{d f^4 g^2}{17280} - \frac{d^2 f^4 g^2}{103680} - \frac{e f^4 g^2}{17280} - \frac{d e f^4 g^2}{34560} - \frac{e^2 f^4 g^2}{103680} + \frac{f^6 g^2}{362880} - \frac{g^4}{720} - \frac{d g^4}{1440} - \frac{d^2 g^4}{8640} +$$
$$\frac{d^4 g^4}{518400} - \frac{e g^4}{1440} - \frac{d e g^4}{2880} - \frac{d^2 e g^4}{17280} - \frac{e^2 g^4}{8640} - \frac{d e^2 g^4}{17280} - \frac{d^2 e^2 g^4}{103680} + \frac{e^4 g^4}{518400} - \frac{f g^4}{1440} -$$
$$\frac{d f g^4}{2880} - \frac{d^2 f g^4}{17280} - \frac{e f g^4}{2880} - \frac{d e f g^4}{5760} - \frac{d^2 e f g^4}{34560} - \frac{e^2 f g^4}{17280} - \frac{d e^2 f g^4}{34560} - \frac{f^2 g^4}{8640} - \frac{d f^2 g^4}{17280} -$$
$$\frac{d^2 f^2 g^4}{103680} - \frac{e f^2 g^4}{17280} - \frac{d e f^2 g^4}{34560} - \frac{e^2 f^2 g^4}{103680} + \frac{f^4 g^4}{518400} + \frac{g^6}{30240} + \frac{d g^6}{60480} + \frac{d^2 g^6}{362880} +$$
$$\frac{e g^6}{60480} + \frac{d e g^6}{120960} + \frac{e^2 g^6}{362880} + \frac{f g^6}{60480} + \frac{d f g^6}{120960} + \frac{e f g^6}{120960} + \frac{f^2 g^6}{362880} - \frac{g^8}{1209600}$$

In[15]:= **q8 = q6 * q7**

Out[15]=

$$\Bigg(1 + \frac{d}{2} + \frac{d^2}{12} - \frac{d^4}{720} + \frac{d^6}{30240} - \frac{d^8}{1209600} + \frac{e}{2} + \frac{d e}{4} + \frac{d^2 e}{24} - \frac{d^4 e}{1440} + \frac{d^6 e}{60480} + \frac{e^2}{12} + \frac{d e^2}{24} +$$
$$\frac{d^2 e^2}{144} - \frac{d^4 e^2}{8640} + \frac{d^6 e^2}{362880} - \frac{e^4}{720} - \frac{d e^4}{1440} - \frac{d^2 e^4}{8640} + \frac{d^4 e^4}{518400} + \frac{e^6}{30240} + \frac{d e^6}{60480} + \frac{d^2 e^6}{362880} -$$
$$\frac{e^8}{1209600} + \frac{f}{2} + \frac{d f}{4} + \frac{d^2 f}{24} - \frac{d^4 f}{1440} + \frac{d^6 f}{60480} + \frac{e f}{4} + \frac{d e f}{8} + \frac{1}{48} d^2 e f - \frac{d^4 e f}{2880} +$$
$$\frac{d^6 e f}{120960} + \frac{e^2 f}{24} + \frac{1}{48} d e^2 f + \frac{1}{288} d^2 e^2 f - \frac{d^4 e^2 f}{17280} - \frac{e^4 f}{1440} - \frac{d e^4 f}{2880} - \frac{d^2 e^4 f}{17280} + \frac{e^6 f}{60480} +$$
$$\frac{d e^6 f}{120960} + \frac{f^2}{12} + \frac{d f^2}{24} + \frac{d^2 f^2}{144} - \frac{d^4 f^2}{8640} + \frac{d^6 f^2}{362880} + \frac{e f^2}{24} + \frac{1}{48} d e f^2 + \frac{1}{288} d^2 e f^2 -$$
$$\frac{d^4 e f^2}{17280} + \frac{e^2 f^2}{144} + \frac{1}{288} d e^2 f^2 + \frac{d^2 e^2 f^2}{1728} - \frac{d^4 e^2 f^2}{103680} - \frac{e^4 f^2}{8640} - \frac{d e^4 f^2}{17280} - \frac{d^2 e^4 f^2}{103680} +$$
$$\frac{e^6 f^2}{362880} - \frac{f^4}{720} - \frac{d f^4}{1440} - \frac{d^2 f^4}{8640} + \frac{d^4 f^4}{518400} - \frac{e f^4}{1440} - \frac{d e f^4}{2880} - \frac{d^2 e f^4}{17280} - \frac{e^2 f^4}{8640} - \frac{d e^2 f^4}{17280} -$$
$$\frac{d^2 e^2 f^4}{103680} + \frac{e^4 f^4}{518400} + \frac{f^6}{30240} + \frac{d f^6}{60480} + \frac{d^2 f^6}{362880} + \frac{e f^6}{60480} + \frac{d e f^6}{120960} + \frac{e^2 f^6}{362880} -$$
$$\frac{f^8}{1209600} + \frac{g}{2} + \frac{d g}{4} + \frac{d^2 g}{24} - \frac{d^4 g}{1440} + \frac{d^6 g}{60480} + \frac{e g}{4} + \frac{d e g}{8} + \frac{1}{48} d^2 e g - \frac{d^4 e g}{2880} +$$
$$\frac{d^6 e g}{120960} + \frac{e^2 g}{24} + \frac{1}{48} d e^2 g + \frac{1}{288} d^2 e^2 g - \frac{d^4 e^2 g}{17280} - \frac{e^4 g}{1440} - \frac{d e^4 g}{2880} - \frac{d^2 e^4 g}{17280} +$$
$$\frac{e^6 g}{60480} + \frac{d e^6 g}{120960} + \frac{f g}{4} + \frac{d f g}{8} + \frac{1}{48} d^2 f g - \frac{d^4 f g}{2880} + \frac{d^6 f g}{120960} + \frac{e f g}{8} + \frac{1}{16} d e f g +$$
$$\frac{1}{96} d^2 e f g - \frac{d^4 e f g}{5760} + \frac{1}{48} e^2 f g + \frac{1}{96} d e^2 f g + \frac{1}{576} d^2 e^2 f g - \frac{d^4 e^2 f g}{34560} - \frac{e^4 f g}{2880} -$$
$$\frac{d e^4 f g}{5760} - \frac{d^2 e^4 f g}{34560} + \frac{e^6 f g}{120960} + \frac{f^2 g}{24} + \frac{1}{48} d f^2 g + \frac{1}{288} d^2 f^2 g - \frac{d^4 f^2 g}{17280} + \frac{1}{48} e f^2 g +$$
$$\frac{1}{96} d e f^2 g + \frac{1}{576} d^2 e f^2 g - \frac{d^4 e f^2 g}{34560} + \frac{1}{288} e^2 f^2 g + \frac{1}{576} d e^2 f^2 g + \frac{d^2 e^2 f^2 g}{3456} -$$
$$\frac{e^4 f^2 g}{17280} - \frac{d e^4 f^2 g}{34560} - \frac{f^4 g}{1440} - \frac{d f^4 g}{2880} - \frac{d^2 f^4 g}{17280} - \frac{e f^4 g}{2880} - \frac{d e f^4 g}{5760} - \frac{d^2 e f^4 g}{34560} - \frac{e^2 f^4 g}{17280} -$$

$$\frac{d e^2 f^4 g}{34560} + \frac{f^6 g}{60480} + \frac{d f^6 g}{120960} + \frac{e f^6 g}{120960} + \frac{g^2}{12} + \frac{d g^2}{24} + \frac{d^2 g^2}{144} - \frac{d^4 g^2}{8640} + \frac{d^6 g^2}{362880} + \frac{e g^2}{24} +$$
$$\frac{1}{48} d e g^2 + \frac{1}{288} d^2 e g^2 - \frac{d^4 e g^2}{17280} + \frac{e^2 g^2}{144} + \frac{1}{288} d e^2 g^2 + \frac{d^2 e^2 g^2}{1728} - \frac{d^4 e^2 g^2}{103680} - \frac{e^4 g^2}{8640} -$$
$$\frac{d e^4 g^2}{17280} - \frac{d^2 e^4 g^2}{103680} + \frac{e^6 g^2}{362880} + \frac{f g^2}{24} + \frac{1}{48} d f g^2 + \frac{1}{288} d^2 f g^2 - \frac{d^4 f g^2}{17280} + \frac{1}{48} e f g^2 +$$
$$\frac{1}{96} d e f g^2 + \frac{1}{576} d^2 e f g^2 - \frac{d^4 e f g^2}{34560} + \frac{1}{288} e^2 f g^2 + \frac{1}{576} d e^2 f g^2 + \frac{d^2 e^2 f g^2}{3456} -$$
$$\frac{e^4 f g^2}{17280} - \frac{d e^4 f g^2}{34560} + \frac{f^2 g^2}{144} + \frac{1}{288} d f^2 g^2 + \frac{d^2 f^2 g^2}{1728} - \frac{d^4 f^2 g^2}{103680} + \frac{1}{288} e f^2 g^2 +$$
$$\frac{1}{576} d e f^2 g^2 + \frac{d^2 e f^2 g^2}{3456} + \frac{e^2 f^2 g^2}{1728} + \frac{d e^2 f^2 g^2}{3456} + \frac{d^2 e^2 f^2 g^2}{20736} - \frac{e^4 f^2 g^2}{103680} - \frac{f^4 g^2}{8640} -$$
$$\frac{d f^4 g^2}{17280} - \frac{d^2 f^4 g^2}{103680} - \frac{e f^4 g^2}{17280} - \frac{d e f^4 g^2}{34560} - \frac{e^2 f^4 g^2}{103680} + \frac{f^6 g^2}{362880} - \frac{g^4}{720} - \frac{d g^4}{1440} - \frac{d^2 g^4}{8640} +$$
$$\frac{d^4 g^4}{518400} - \frac{e g^4}{1440} - \frac{d e g^4}{2880} - \frac{d^2 e g^4}{17280} - \frac{e^2 g^4}{8640} - \frac{d e^2 g^4}{17280} - \frac{d^2 e^2 g^4}{103680} + \frac{e^4 g^4}{518400} - \frac{f g^4}{1440} -$$
$$\frac{d f g^4}{2880} - \frac{d^2 f g^4}{17280} - \frac{e f g^4}{2880} - \frac{d e f g^4}{5760} - \frac{d^2 e f g^4}{34560} - \frac{e^2 f g^4}{17280} - \frac{d e^2 f g^4}{34560} - \frac{f^2 g^4}{8640} - \frac{d f^2 g^4}{17280} -$$
$$\frac{d^2 f^2 g^4}{103680} - \frac{e f^2 g^4}{17280} - \frac{d e f^2 g^4}{34560} - \frac{e^2 f^2 g^4}{103680} + \frac{f^4 g^4}{518400} + \frac{g^6}{30240} + \frac{d g^6}{60480} + \frac{d^2 g^6}{362880} +$$
$$\frac{e g^6}{60480} + \frac{d e g^6}{120960} + \frac{e^2 g^6}{362880} + \frac{f g^6}{60480} + \frac{d f g^6}{120960} + \frac{e f g^6}{120960} + \frac{f^2 g^6}{362880} - \frac{g^8}{1209600}\Bigg)$$
$$\Bigg(1 + \frac{a}{2} + \frac{a^2}{12} - \frac{a^4}{720} + \frac{a^6}{30240} - \frac{a^8}{1209600} + \frac{b}{2} + \frac{a b}{4} + \frac{a^2 b}{24} - \frac{a^4 b}{1440} + \frac{a^6 b}{60480} + \frac{b^2}{12} +$$
$$\frac{a b^2}{24} + \frac{a^2 b^2}{144} - \frac{a^4 b^2}{8640} + \frac{a^6 b^2}{362880} - \frac{b^4}{720} - \frac{a b^4}{1440} - \frac{a^2 b^4}{8640} + \frac{a^4 b^4}{518400} + \frac{b^6}{30240} + \frac{a b^6}{60480} +$$
$$\frac{a^2 b^6}{362880} - \frac{b^8}{1209600} + \frac{c}{2} + \frac{a c}{4} + \frac{a^2 c}{24} - \frac{a^4 c}{1440} + \frac{a^6 c}{60480} + \frac{b c}{4} + \frac{a b c}{8} + \frac{1}{48} a^2 b c -$$
$$\frac{a^4 b c}{2880} + \frac{a^6 b c}{120960} + \frac{b^2 c}{24} + \frac{1}{48} a b^2 c + \frac{1}{288} a^2 b^2 c - \frac{a^4 b^2 c}{17280} - \frac{b^4 c}{1440} - \frac{a b^4 c}{2880} -$$
$$\frac{a^2 b^4 c}{17280} + \frac{b^6 c}{60480} + \frac{a b^6 c}{120960} + \frac{c^2}{12} + \frac{a c^2}{24} + \frac{a^2 c^2}{144} - \frac{a^4 c^2}{8640} + \frac{a^6 c^2}{362880} + \frac{b c^2}{24} + \frac{1}{48} a b c^2 +$$
$$\frac{1}{288} a^2 b c^2 - \frac{a^4 b c^2}{17280} + \frac{b^2 c^2}{144} + \frac{1}{288} a b^2 c^2 + \frac{a^2 b^2 c^2}{1728} - \frac{a^4 b^2 c^2}{103680} - \frac{b^4 c^2}{8640} - \frac{a b^4 c^2}{17280} -$$
$$\frac{a^2 b^4 c^2}{103680} + \frac{b^6 c^2}{362880} - \frac{c^4}{720} - \frac{a c^4}{1440} - \frac{a^2 c^4}{8640} + \frac{a^4 c^4}{518400} - \frac{b c^4}{1440} - \frac{a b c^4}{2880} - \frac{a^2 b c^4}{17280} - \frac{b^2 c^4}{8640} -$$
$$\frac{a b^2 c^4}{17280} - \frac{a^2 b^2 c^4}{103680} + \frac{b^4 c^4}{518400} + \frac{c^6}{30240} + \frac{a c^6}{60480} + \frac{a^2 c^6}{362880} + \frac{b c^6}{60480} + \frac{a b c^6}{120960} +$$
$$\frac{b^2 c^6}{362880} - \frac{c^8}{1209600} + \frac{h}{2} + \frac{a h}{4} + \frac{a^2 h}{24} - \frac{a^4 h}{1440} + \frac{a^6 h}{60480} + \frac{b h}{4} + \frac{a b h}{8} + \frac{1}{48} a^2 b h -$$
$$\frac{a^4 b h}{2880} + \frac{a^6 b h}{120960} + \frac{b^2 h}{24} + \frac{1}{48} a b^2 h + \frac{1}{288} a^2 b^2 h - \frac{a^4 b^2 h}{17280} - \frac{b^4 h}{1440} - \frac{a b^4 h}{2880} - \frac{a^2 b^4 h}{17280} +$$
$$\frac{b^6 h}{60480} + \frac{a b^6 h}{120960} + \frac{c h}{4} + \frac{a c h}{8} + \frac{1}{48} a^2 c h - \frac{a^4 c h}{2880} + \frac{a^6 c h}{120960} + \frac{b c h}{8} + \frac{1}{16} a b c h +$$

$$\frac{1}{96} a^2 b c h - \frac{a^4 b c h}{5760} + \frac{1}{48} b^2 c h + \frac{1}{96} a b^2 c h + \frac{1}{576} a^2 b^2 c h - \frac{a^4 b^2 c h}{34560} - \frac{b^4 c h}{2880} -$$
$$\frac{a b^4 c h}{5760} - \frac{a^2 b^4 c h}{34560} + \frac{b^6 c h}{120960} + \frac{c^2 h}{24} + \frac{1}{48} a c^2 h + \frac{1}{288} a^2 c^2 h - \frac{a^4 c^2 h}{17280} + \frac{1}{48} b c^2 h +$$
$$\frac{1}{96} a b c^2 h + \frac{1}{576} a^2 b c^2 h - \frac{a^4 b c^2 h}{34560} + \frac{1}{288} b^2 c^2 h + \frac{1}{576} a b^2 c^2 h + \frac{a^2 b^2 c^2 h}{3456} -$$
$$\frac{b^4 c^2 h}{17280} - \frac{a b^4 c^2 h}{34560} - \frac{c^4 h}{1440} - \frac{a c^4 h}{2880} - \frac{a^2 c^4 h}{17280} - \frac{b c^4 h}{2880} - \frac{a b c^4 h}{5760} - \frac{a^2 b c^4 h}{34560} - \frac{b^2 c^4 h}{17280} -$$
$$\frac{a b^2 c^4 h}{34560} + \frac{c^6 h}{60480} + \frac{a c^6 h}{120960} + \frac{b c^6 h}{120960} + \frac{h^2}{12} + \frac{a h^2}{24} + \frac{a^2 h^2}{144} - \frac{a^4 h^2}{8640} + \frac{a^6 h^2}{362880} + \frac{b h^2}{24} +$$
$$\frac{1}{48} a b h^2 + \frac{1}{288} a^2 b h^2 - \frac{a^4 b h^2}{17280} + \frac{b^2 h^2}{144} + \frac{1}{288} a b^2 h^2 + \frac{a^2 b^2 h^2}{1728} - \frac{a^4 b^2 h^2}{103680} - \frac{b^4 h^2}{8640} -$$
$$\frac{a b^4 h^2}{17280} - \frac{a^2 b^4 h^2}{103680} + \frac{b^6 h^2}{362880} + \frac{c h^2}{24} + \frac{1}{48} a c h^2 + \frac{1}{288} a^2 c h^2 - \frac{a^4 c h^2}{17280} + \frac{1}{48} b c h^2 +$$
$$\frac{1}{96} a b c h^2 + \frac{1}{576} a^2 b c h^2 - \frac{a^4 b c h^2}{34560} + \frac{1}{288} b^2 c h^2 + \frac{1}{576} a b^2 c h^2 + \frac{a^2 b^2 c h^2}{3456} -$$
$$\frac{b^4 c h^2}{17280} - \frac{a b^4 c h^2}{34560} + \frac{c^2 h^2}{144} + \frac{1}{288} a c^2 h^2 + \frac{a^2 c^2 h^2}{1728} - \frac{a^4 c^2 h^2}{103680} + \frac{1}{288} b c^2 h^2 +$$
$$\frac{1}{576} a b c^2 h^2 + \frac{a^2 b c^2 h^2}{3456} + \frac{b^2 c^2 h^2}{1728} + \frac{a b^2 c^2 h^2}{3456} + \frac{a^2 b^2 c^2 h^2}{20736} - \frac{b^4 c^2 h^2}{103680} - \frac{c^4 h^2}{8640} -$$
$$\frac{a c^4 h^2}{17280} - \frac{a^2 c^4 h^2}{103680} - \frac{b c^4 h^2}{17280} - \frac{a b c^4 h^2}{34560} - \frac{b^2 c^4 h^2}{103680} + \frac{c^6 h^2}{362880} - \frac{h^4}{720} - \frac{a h^4}{1440} - \frac{a^2 h^4}{8640} +$$
$$\frac{a^4 h^4}{518400} - \frac{b h^4}{1440} - \frac{a b h^4}{2880} - \frac{a^2 b h^4}{17280} - \frac{b^2 h^4}{8640} - \frac{a b^2 h^4}{17280} - \frac{a^2 b^2 h^4}{103680} + \frac{b^4 h^4}{518400} - \frac{c h^4}{1440} -$$
$$\frac{a c h^4}{2880} - \frac{a^2 c h^4}{17280} - \frac{b c h^4}{2880} - \frac{a b c h^4}{5760} - \frac{a^2 b c h^4}{34560} - \frac{b^2 c h^4}{17280} - \frac{a b^2 c h^4}{34560} - \frac{c^2 h^4}{8640} - \frac{a c^2 h^4}{17280} -$$
$$\frac{a^2 c^2 h^4}{103680} - \frac{b c^2 h^4}{17280} - \frac{a b c^2 h^4}{34560} - \frac{b^2 c^2 h^4}{103680} + \frac{c^4 h^4}{518400} + \frac{h^6}{30240} + \frac{a h^6}{60480} + \frac{a^2 h^6}{362880} +$$
$$\frac{b h^6}{60480} + \frac{a b h^6}{120960} + \frac{b^2 h^6}{362880} + \frac{c h^6}{60480} + \frac{a c h^6}{120960} + \frac{b c h^6}{120960} + \frac{c^2 h^6}{362880} - \frac{h^8}{1209600}\Big)$$

In[16]:=
```
var3 = {a, b, c, d, e, f, g, h}
```

Out[16]=

{a, b, c, d, e, f, g, h}

In[17]:=
```
q9 = FromCoefficientRules[
  Select[CoefficientRules[q8, var3], Total@#[[1]] ≤ 8 &], var3]
```

Out[17]=

$$1 + \frac{a}{2} + \frac{a^2}{12} - \frac{a^4}{720} + \frac{a^6}{30240} - \frac{a^8}{1209600} + \frac{b}{2} + \frac{a b}{4} + \frac{a^2 b}{24} - \frac{a^4 b}{1440} + \frac{a^6 b}{60480} + \frac{b^2}{12} + \frac{a b^2}{24} + \cdots 8521 \cdots +$$
$$\frac{d f h^6}{120960} + \frac{e f h^6}{120960} + \frac{f^2 h^6}{362880} + \frac{g h^6}{60480} + \frac{a g h^6}{120960} + \frac{b g h^6}{120960} + \frac{c g h^6}{120960} + \frac{d g h^6}{120960} + \frac{e g h^6}{120960} + \frac{f g h^6}{120960} + \frac{g^2 h^6}{362880} - \frac{h^8}{1209600}$$

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In[18]:=
```
SeriesCoefficient[q9, {a, 0, 8}, {b, 0, 0}, {c, 0, 0},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[18]=

$$-\frac{1}{1\,209\,600}$$

In[19]:=
```
SeriesCoefficient[q9, {a, 0, 7}, {b, 0, 1}, {c, 0, 0},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[19]=

0

In[20]:=
```
SeriesCoefficient[q9, {a, 0, 6}, {b, 0, 2}, {c, 0, 0},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[20]=

$$\frac{1}{362\,880}$$

In[21]:=
```
SeriesCoefficient[q9, {a, 0, 6}, {b, 0, 1}, {c, 0, 1},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[21]=

$$\frac{1}{120\,960}$$

In[22]:=
```
SeriesCoefficient[q9, {a, 0, 5}, {b, 0, 3}, {c, 0, 0},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[22]=

0

In[23]:=
```
SeriesCoefficient[q9, {a, 0, 5}, {b, 0, 2}, {c, 0, 1},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[23]=

0

In[24]:=
```
SeriesCoefficient[q9, {a, 0, 5}, {b, 0, 1}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[24]=

0

In[25]:=
```
SeriesCoefficient[q9, {a, 0, 4}, {b, 0, 4}, {c, 0, 0},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[25]=

$$\frac{1}{518\,400}$$

In[26]:=
```
SeriesCoefficient[q9, {a, 0, 4}, {b, 0, 3}, {c, 0, 1},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[26]=

0

In[27]:=
```
SeriesCoefficient[q9, {a, 0, 4}, {b, 0, 2}, {c, 0, 2},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[27]=

$$-\frac{1}{103\,680}$$

In[28]:=
```
SeriesCoefficient[q9, {a, 0, 4}, {b, 0, 2}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[28]=

$$-\frac{1}{34\,560}$$

In[29]:=
```
SeriesCoefficient[q9, {a, 0, 4}, {b, 0, 1}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 1}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[29]=

$$-\frac{1}{11\,520}$$

In[30]:=
```
SeriesCoefficient[q9, {a, 0, 3}, {b, 0, 3}, {c, 0, 2},
 {d, 0, 0}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[30]=

0

In[31]:=
```
SeriesCoefficient[q9, {a, 0, 3}, {b, 0, 3}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[31]=

0

In[32]:=
```
SeriesCoefficient[q9, {a, 0, 3}, {b, 0, 2}, {c, 0, 2},
 {d, 0, 1}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[32]=

0

In[33]:=
```
SeriesCoefficient[q9, {a, 0, 3}, {b, 0, 2}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 1}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[33]=

0

In[34]:=
```
SeriesCoefficient[q9, {a, 0, 3}, {b, 0, 1}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 1}, {f, 0, 1}, {g, 0, 0}, {h, 0, 0}]
```

Out[34]=

0

In[35]:=
```
SeriesCoefficient[q9, {a, 0, 2}, {b, 0, 2}, {c, 0, 2},
 {d, 0, 2}, {e, 0, 0}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[35]=

$$\frac{1}{20\,736}$$

In[36]:=
```
SeriesCoefficient[q9, {a, 0, 2}, {b, 0, 2}, {c, 0, 2},
 {d, 0, 1}, {e, 0, 1}, {f, 0, 0}, {g, 0, 0}, {h, 0, 0}]
```

Out[36]=

$$\frac{1}{6912}$$

In[37]:=
```
SeriesCoefficient[q9, {a, 0, 2}, {b, 0, 2}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 1}, {f, 0, 1}, {g, 0, 0}, {h, 0, 0}]
```

Out[37]=

$$\frac{1}{2304}$$

In[38]:=
```
SeriesCoefficient[q9, {a, 0, 2}, {b, 0, 1}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 1}, {f, 0, 1}, {g, 0, 1}, {h, 0, 0}]
```

Out[38]=

$$\frac{1}{768}$$

In[39]:=
```
SeriesCoefficient[q9, {a, 0, 1}, {b, 0, 1}, {c, 0, 1},
 {d, 0, 1}, {e, 0, 1}, {f, 0, 1}, {g, 0, 1}, {h, 0, 1}]
```

Out[39]=

$$\frac{1}{256}$$

In[40]:=
```
td = 1 + (1 / 2) * c1 * t + (1 / 12) * (c1 ^ 2 + c2) * t ^ 2 + (1 / 24) * c1 * c2 * t ^ 3 -
  (1 / 720) (c1 ^ 4 - 4 * c1 ^ 2 * c2 - 3 * c2 ^ 2 - c1 * c3 + c4) * t ^ 4 -
  (1 / 1440) * (c1 ^ 3 * c2 - 3 * c1 * c2 ^ 2 - c1 ^ 2 * c3 + c1 * c4) * t ^ 5 +
  (1 / 60 480) * (2 * c1 ^ 6 - 12 * c1 ^ 4 * c2 + 11 * c1 ^ 2 * c2 ^ 2 + 10 * c2 ^ 3 + 5 * c1 ^ 3 * c3 +
     11 * c1 * c2 * c3 - c3 ^ 2 - 5 * c1 ^ 2 * c4 - 9 * c2 * c4 - 2 * c1 * c5 + 2 * c6) * t ^ 6 +
  (1 / 60 480) * (c1 ^ 5 * c2 - 5 * c1 ^ 3 * c2 ^ 2 + 5 * c1 * c2 ^ 3 - c1 ^ 4 * c3 + (11 / 2) * c1 ^ 2 *
      c2 * c3 - (1 / 2) * c1 * c3 ^ 2 + c1 ^ 3 * c4 - (9 / 2) * c1 * c2 * c4 - c1 ^ 2 * c5 + c1 * c6) *
   t ^ 7 - (1 / 3 628 800) * (3 * c1 ^ 8 - 24 * c1 ^ 6 * c2 + 50 * c1 ^ 4 * c2 ^ 2 -
     8 * c1 ^ 2 * c2 ^ 3 - 21 * c2 ^ 4 + 14 * c1 ^ 5 * c3 - 26 * c1 ^ 3 * c2 * c3 -
     50 * c1 * c2 ^ 2 * c3 - 3 * c1 ^ 2 * c3 ^ 2 + 8 * c2 * c3 ^ 2 - 14 * c1 ^ 4 * c4 +
     19 * c1 ^ 2 * c2 * c4 + 34 * c2 ^ 2 * c4 + 13 * c1 * c3 * c4 - 5 * c4 ^ 2 + 7 * c1 ^ 3 * c5 +
     16 * c1 * c2 * c5 - 3 * c3 * c5 - 7 * c1 ^ 2 * c6 - 13 * c2 * c6 - 3 * c1 * c7 + 3 * c8) * t ^ 8
```

Out[40]=

$$1 + \frac{c1\, t}{2} + \frac{1}{12}\left(c1^2 + c2\right) t^2 + \frac{1}{24}\, c1\, c2\, t^3 - \frac{1}{720}\left(c1^4 - 4\, c1^2\, c2 - 3\, c2^2 - c1\, c3 + c4\right) t^4 - \frac{\left(c1^3\, c2 - 3\, c1\, c2^2 - c1^2\, c3 + c1\, c4\right) t^5}{1440} + \frac{1}{60\,480}\left(2\, c1^6 - 12\, c1^4\, c2 + 11\, c1^2\, c2^2 + 10\, c2^3 + 5\, c1^3\, c3 + 11\, c1\, c2\, c3 - c3^2 - 5\, c1^2\, c4 - 9\, c2\, c4 - 2\, c1\, c5 + 2\, c6\right) t^6 + \frac{1}{60\,480}\left(c1^5\, c2 - 5\, c1^3\, c2^2 + 5\, c1\, c2^3 - c1^4\, c3 + \frac{11}{2}\, c1^2\, c2\, c3 - \frac{c1\, c3^2}{2} + c1^3\, c4 - \frac{9\, c1\, c2\, c4}{2} - c1^2\, c5 + c1\, c6\right) t^7 - \frac{1}{3\,628\,800}\left(3\, c1^8 - 24\, c1^6\, c2 + 50\, c1^4\, c2^2 - 8\, c1^2\, c2^3 - 21\, c2^4 + 14\, c1^5\, c3 - 26\, c1^3\, c2\, c3 - 50\, c1\, c2^2\, c3 - 3\, c1^2\, c3^2 + 8\, c2\, c3^2 - 14\, c1^4\, c4 + 19\, c1^2\, c2\, c4 + 34\, c2^2\, c4 + 13\, c1\, c3\, c4 - 5\, c4^2 + 7\, c1^3\, c5 + 16\, c1\, c2\, c5 - 3\, c3\, c5 - 7\, c1^2\, c6 - 13\, c2\, c6 - 3\, c1\, c7 + 3\, c8\right) t^8$$

In[41]:=
```
Expand[(1 + (a1 + a2) * t) * (1 + (a1 + a3) * t) * (1 + (a1 + a4) * t) *
  (1 + (a1 + a5) * t) * (1 + (a1 + a6) * t) * (1 + (a2 + a3) * t) * (1 + (a2 + a4) * t) *
  (1 + (a2 + a5) * t) * (1 + (a2 + a6) * t) * (1 + (a3 + a4) * t) * (1 + (a3 + a5) * t) *
  (1 + (a3 + a6) * t) * (1 + (a4 + a5) * t) * (1 + (a4 + a6) * t) * (1 + (a5 + a6) * t)]
```

Out[41]=

$$1 + 5\, a1\, t + 5\, a2\, t + 5\, a3\, t + 5\, a4\, t + 5\, a5\, t + 5\, a6\, t + 10\, a1^2\, t^2 + \cdots 22\,788 \cdots + a2\, a3^3\, a4^2\, a5^4\, a6^5\, t^{15} + a1^2\, a2\, a4^3\, a5^4\, a6^5\, t^{15} + a1\, a2^2\, a4^3\, a5^4\, a6^5\, t^{15} + a1^2\, a3\, a4^3\, a5^4\, a6^5\, t^{15} + 2\, a1\, a2\, a3\, a4^3\, a5^4\, a6^5\, t^{15} + a2^2\, a3\, a4^3\, a5^4\, a6^5\, t^{15} + a1\, a3^2\, a4^3\, a5^4\, a6^5\, t^{15} + a2\, a3^2\, a4^3\, a5^4\, a6^5\, t^{15}$$

Size in memory: 9.7 MB | + Show more | Show all | Iconize | Store full expression in notebook

In[42]:=
```
G8 = SeriesCoefficient[%41, {t, 0, 8}]
```

Out[42]=

$$4\, a1^5\, a2^3 + 9\, a1^4\, a2^4 + 4\, a1^3\, a2^5 + 21\, a1^5\, a2^2\, a3 + 90\, a1^4\, a2^3\, a3 + 90\, a1^3\, a2^4\, a3 + 21\, a1^2\, a2^5\, a3 + 21\, a1^5\, a2\, a3^2 + 177\, a1^4\, a2^2\, a3^2 + 331\, a1^3\, a2^3\, a3^2 + 177\, a1^2\, a2^4\, a3^2 + 21\, a1\, a2^5\, a3^2 + 4\, a1^5\, a3^3 + 90\, a1^4\, a2\, a3^3 + 331\, a1^3\, a2^2\, a3^3 + 331\, a1^2\, a2^3\, a3^3 + 90\, a1\, a2^4\, a3^3 + 4\, a2^5\, a3^3 + 9\, a1^4\, a3^4 + 90\, a1^3\, a2\, a3^4 + 177\, a1^2\, a2^2\, a3^4 + 90\, a1\, a2^3\, a3^4 + 9\, a2^4\, a3^4 + 4\, a1^3\, a3^5 + 21\, a1^2\, a2\, a3^5 + 21\, a1\, a2^2\, a3^5 + 4\, a2^3\, a3^5 + 21\, a1^5\, a2^2\, a4 + 90\, a1^4\, a2^3\, a4 + 90\, a1^3\, a2^4\, a4 + 21\, a1^2\, a2^5\, a4 + 52\, a1^5\, a2\, a3\, a4 + 429\, a1^4\, a2^2\, a3\, a4 +$$

$$
\begin{aligned}
&798\, a1^3\, a2^3\, a3\, a4 + 429\, a1^2\, a2^4\, a3\, a4 + 52\, a1\, a2^5\, a3\, a4 + 21\, a1^5\, a3^2\, a4 + 429\, a1^4\, a2\, a3^2\, a4 + \\
&1518\, a1^3\, a2^2\, a3^2\, a4 + 1518\, a1^2\, a2^3\, a3^2\, a4 + 429\, a1\, a2^4\, a3^2\, a4 + 21\, a2^5\, a3^2\, a4 + \\
&90\, a1^4\, a3^3\, a4 + 798\, a1^3\, a2\, a3^3\, a4 + 1518\, a1^2\, a2^2\, a3^3\, a4 + 798\, a1\, a2^3\, a3^3\, a4 + 90\, a2^4\, a3^3\, a4 + \\
&90\, a1^3\, a3^4\, a4 + 429\, a1^2\, a2\, a3^4\, a4 + 429\, a1\, a2^2\, a3^4\, a4 + 90\, a2^3\, a3^4\, a4 + 21\, a1^2\, a3^5\, a4 + \\
&52\, a1\, a2\, a3^5\, a4 + 21\, a2^2\, a3^5\, a4 + 21\, a1^5\, a2\, a4^2 + 177\, a1^4\, a2^2\, a4^2 + 331\, a1^3\, a2^3\, a4^2 + \\
&177\, a1^2\, a2^4\, a4^2 + 21\, a1\, a2^5\, a4^2 + 21\, a1^5\, a3\, a4^2 + 429\, a1^4\, a2\, a3\, a4^2 + 1518\, a1^3\, a2^2\, a3\, a4^2 + \\
&1518\, a1^2\, a2^3\, a3\, a4^2 + 429\, a1\, a2^4\, a3\, a4^2 + 21\, a2^5\, a3\, a4^2 + 177\, a1^4\, a3^2\, a4^2 + \\
&1518\, a1^3\, a2\, a3^2\, a4^2 + 2859\, a1^2\, a2^2\, a3^2\, a4^2 + 1518\, a1\, a2^3\, a3^2\, a4^2 + 177\, a2^4\, a3^2\, a4^2 + \\
&331\, a1^3\, a3^3\, a4^2 + 1518\, a1^2\, a2\, a3^3\, a4^2 + 1518\, a1\, a2^2\, a3^3\, a4^2 + 331\, a2^3\, a3^3\, a4^2 + \\
&177\, a1^2\, a3^4\, a4^2 + 429\, a1\, a2\, a3^4\, a4^2 + 177\, a2^2\, a3^4\, a4^2 + 21\, a1\, a3^5\, a4^2 + 21\, a2\, a3^5\, a4^2 + \\
&4\, a1^5\, a4^3 + 90\, a1^4\, a2\, a4^3 + 331\, a1^3\, a2^2\, a4^3 + 331\, a1^2\, a2^3\, a4^3 + 90\, a1\, a2^4\, a4^3 + 4\, a2^5\, a4^3 + \\
&90\, a1^4\, a3\, a4^3 + 798\, a1^3\, a2\, a3\, a4^3 + 1518\, a1^2\, a2^2\, a3\, a4^3 + 798\, a1\, a2^3\, a3\, a4^3 + 90\, a2^4\, a3\, a4^3 + \\
&331\, a1^3\, a3^2\, a4^3 + 1518\, a1^2\, a2\, a3^2\, a4^3 + 1518\, a1\, a2^2\, a3^2\, a4^3 + 331\, a2^3\, a3^2\, a4^3 + \\
&331\, a1^2\, a3^3\, a4^3 + 798\, a1\, a2\, a3^3\, a4^3 + 331\, a2^2\, a3^3\, a4^3 + 90\, a1\, a3^4\, a4^3 + 90\, a2\, a3^4\, a4^3 + \\
&4\, a3^5\, a4^3 + 9\, a1^4\, a4^4 + 90\, a1^3\, a2\, a4^4 + 177\, a1^2\, a2^2\, a4^4 + 90\, a1\, a2^3\, a4^4 + 9\, a2^4\, a4^4 + \\
&90\, a1^3\, a3\, a4^4 + 429\, a1^2\, a2\, a3\, a4^4 + 429\, a1\, a2^2\, a3\, a4^4 + 90\, a2^3\, a3\, a4^4 + 177\, a1^2\, a3^2\, a4^4 + \\
&429\, a1\, a2\, a3^2\, a4^4 + 177\, a2^2\, a3^2\, a4^4 + 90\, a1\, a3^3\, a4^4 + 90\, a2\, a3^3\, a4^4 + 9\, a3^4\, a4^4 + \\
&4\, a1^3\, a4^5 + 21\, a1^2\, a2\, a4^5 + 21\, a1\, a2^2\, a4^5 + 4\, a2^3\, a4^5 + 21\, a1^2\, a3\, a4^5 + 52\, a1\, a2\, a3\, a4^5 + \\
&21\, a2^2\, a3\, a4^5 + 21\, a1\, a3^2\, a4^5 + 21\, a2\, a3^2\, a4^5 + 4\, a3^3\, a4^5 + 21\, a1^5\, a2^2\, a5 + 90\, a1^4\, a2^3\, a5 + \\
&90\, a1^3\, a2^4\, a5 + 21\, a1^2\, a2^5\, a5 + 52\, a1^5\, a2\, a3\, a5 + 429\, a1^4\, a2^2\, a3\, a5 + 798\, a1^3\, a2^3\, a3\, a5 + \\
&429\, a1^2\, a2^4\, a3\, a5 + 52\, a1\, a2^5\, a3\, a5 + 21\, a1^5\, a3^2\, a5 + 429\, a1^4\, a2\, a3^2\, a5 + 1518\, a1^3\, a2^2\, a3^2\, a5 + \\
&1518\, a1^2\, a2^3\, a3^2\, a5 + 429\, a1\, a2^4\, a3^2\, a5 + 21\, a2^5\, a3^2\, a5 + 90\, a1^4\, a3^3\, a5 + 798\, a1^3\, a2\, a3^3\, a5 + \\
&1518\, a1^2\, a2^2\, a3^3\, a5 + 798\, a1\, a2^3\, a3^3\, a5 + 90\, a2^4\, a3^3\, a5 + 90\, a1^3\, a3^4\, a5 + 429\, a1^2\, a2\, a3^4\, a5 + \\
&429\, a1\, a2^2\, a3^4\, a5 + 90\, a2^3\, a3^4\, a5 + 21\, a1^2\, a3^5\, a5 + 52\, a1\, a2\, a3^5\, a5 + 21\, a2^2\, a3^5\, a5 + \\
&52\, a1^5\, a2\, a4\, a5 + 429\, a1^4\, a2^2\, a4\, a5 + 798\, a1^3\, a2^3\, a4\, a5 + 429\, a1^2\, a2^4\, a4\, a5 + 52\, a1\, a2^5\, a4\, a5 + \\
&52\, a1^5\, a3\, a4\, a5 + 1023\, a1^4\, a2\, a3\, a4\, a5 + 3565\, a1^3\, a2^2\, a3\, a4\, a5 + 3565\, a1^2\, a2^3\, a3\, a4\, a5 + \\
&1023\, a1\, a2^4\, a3\, a4\, a5 + 52\, a2^5\, a3\, a4\, a5 + 429\, a1^4\, a3^2\, a4\, a5 + 3565\, a1^3\, a2\, a3^2\, a4\, a5 + \\
&6654\, a1^2\, a2^2\, a3^2\, a4\, a5 + 3565\, a1\, a2^3\, a3^2\, a4\, a5 + 429\, a2^4\, a3^2\, a4\, a5 + 798\, a1^3\, a3^3\, a4\, a5 + \\
&3565\, a1^2\, a2\, a3^3\, a4\, a5 + 3565\, a1\, a2^2\, a3^3\, a4\, a5 + 798\, a2^3\, a3^3\, a4\, a5 + 429\, a1^2\, a3^4\, a4\, a5 + \\
&1023\, a1\, a2\, a3^4\, a4\, a5 + 429\, a2^2\, a3^4\, a4\, a5 + 52\, a1\, a3^5\, a4\, a5 + 52\, a2\, a3^5\, a4\, a5 + \\
&21\, a1^5\, a4^2\, a5 + 429\, a1^4\, a2\, a4^2\, a5 + 1518\, a1^3\, a2^2\, a4^2\, a5 + 1518\, a1^2\, a2^3\, a4^2\, a5 + \\
&429\, a1\, a2^4\, a4^2\, a5 + 21\, a2^5\, a4^2\, a5 + 429\, a1^4\, a3\, a4^2\, a5 + 3565\, a1^3\, a2\, a3\, a4^2\, a5 + \\
&6654\, a1^2\, a2^2\, a3\, a4^2\, a5 + 3565\, a1\, a2^3\, a3\, a4^2\, a5 + 429\, a2^4\, a3\, a4^2\, a5 + 1518\, a1^3\, a3^2\, a4^2\, a5 + \\
&6654\, a1^2\, a2\, a3^2\, a4^2\, a5 + 6654\, a1\, a2^2\, a3^2\, a4^2\, a5 + 1518\, a2^3\, a3^2\, a4^2\, a5 + 1518\, a1^2\, a3^3\, a4^2\, a5 + \\
&3565\, a1\, a2\, a3^3\, a4^2\, a5 + 1518\, a2^2\, a3^3\, a4^2\, a5 + 429\, a1\, a3^4\, a4^2\, a5 + 429\, a2\, a3^4\, a4^2\, a5 + \\
&21\, a3^5\, a4^2\, a5 + 90\, a1^4\, a4^3\, a5 + 798\, a1^3\, a2\, a4^3\, a5 + 1518\, a1^2\, a2^2\, a4^3\, a5 + 798\, a1\, a2^3\, a4^3\, a5 + \\
&90\, a2^4\, a4^3\, a5 + 798\, a1^3\, a3\, a4^3\, a5 + 3565\, a1^2\, a2\, a3\, a4^3\, a5 + 3565\, a1\, a2^2\, a3\, a4^3\, a5 + \\
&798\, a2^3\, a3\, a4^3\, a5 + 1518\, a1^2\, a3^2\, a4^3\, a5 + 3565\, a1\, a2\, a3^2\, a4^3\, a5 + 1518\, a2^2\, a3^2\, a4^3\, a5 + \\
&798\, a1\, a3^3\, a4^3\, a5 + 798\, a2\, a3^3\, a4^3\, a5 + 90\, a3^4\, a4^3\, a5 + 90\, a1^3\, a4^4\, a5 + 429\, a1^2\, a2\, a4^4\, a5 + \\
&429\, a1\, a2^2\, a4^4\, a5 + 90\, a2^3\, a4^4\, a5 + 429\, a1^2\, a3\, a4^4\, a5 + 1023\, a1\, a2\, a3\, a4^4\, a5 + \\
&429\, a2^2\, a3\, a4^4\, a5 + 429\, a1\, a3^2\, a4^4\, a5 + 429\, a2\, a3^2\, a4^4\, a5 + 90\, a3^3\, a4^4\, a5 + 21\, a1^2\, a4^5\, a5 + \\
&52\, a1\, a2\, a4^5\, a5 + 21\, a2^2\, a4^5\, a5 + 52\, a1\, a3\, a4^5\, a5 + 52\, a2\, a3\, a4^5\, a5 + 21\, a3^2\, a4^5\, a5 + \\
&21\, a1^5\, a2\, a5^2 + 177\, a1^4\, a2^2\, a5^2 + 331\, a1^3\, a2^3\, a5^2 + 177\, a1^2\, a2^4\, a5^2 + 21\, a1\, a2^5\, a5^2 + \\
&21\, a1^5\, a3\, a5^2 + 429\, a1^4\, a2\, a3\, a5^2 + 1518\, a1^3\, a2^2\, a3\, a5^2 + 1518\, a1^2\, a2^3\, a3\, a5^2 + \\
&429\, a1\, a2^4\, a3\, a5^2 + 21\, a2^5\, a3\, a5^2 + 177\, a1^4\, a3^2\, a5^2 + 1518\, a1^3\, a2\, a3^2\, a5^2 + \\
&2859\, a1^2\, a2^2\, a3^2\, a5^2 + 1518\, a1\, a2^3\, a3^2\, a5^2 + 177\, a2^4\, a3^2\, a5^2 + 331\, a1^3\, a3^3\, a5^2 + \\
&1518\, a1^2\, a2\, a3^3\, a5^2 + 1518\, a1\, a2^2\, a3^3\, a5^2 + 331\, a2^3\, a3^3\, a5^2 + 177\, a1^2\, a3^4\, a5^2 +
\end{aligned}
$$

$429\, a1\, a2\, a3^4\, a5^2 + 177\, a2^2\, a3^4\, a5^2 + 21\, a1\, a3^5\, a5^2 + 21\, a2\, a3^5\, a5^2 + 21\, a1^5\, a4\, a5^2 +$
$429\, a1^4\, a2\, a4\, a5^2 + 1518\, a1^3\, a2^2\, a4\, a5^2 + 1518\, a1^2\, a2^3\, a4\, a5^2 + 429\, a1\, a2^4\, a4\, a5^2 +$
$21\, a2^5\, a4\, a5^2 + 429\, a1^4\, a3\, a4\, a5^2 + 3565\, a1^3\, a2\, a3\, a4\, a5^2 + 6654\, a1^2\, a2^2\, a3\, a4\, a5^2 +$
$3565\, a1\, a2^3\, a3\, a4\, a5^2 + 429\, a2^4\, a3\, a4\, a5^2 + 1518\, a1^3\, a3^2\, a4\, a5^2 + 6654\, a1^2\, a2\, a3^2\, a4\, a5^2 +$
$6654\, a1\, a2^2\, a3^2\, a4\, a5^2 + 1518\, a2^3\, a3^2\, a4\, a5^2 + 1518\, a1^2\, a3^3\, a4\, a5^2 + 3565\, a1\, a2\, a3^3\, a4\, a5^2 +$
$1518\, a2^2\, a3^3\, a4\, a5^2 + 429\, a1\, a3^4\, a4\, a5^2 + 429\, a2\, a3^4\, a4\, a5^2 + 21\, a3^5\, a4\, a5^2 +$
$177\, a1^4\, a4^2\, a5^2 + 1518\, a1^3\, a2\, a4^2\, a5^2 + 2859\, a1^2\, a2^2\, a4^2\, a5^2 + 1518\, a1\, a2^3\, a4^2\, a5^2 +$
$177\, a2^4\, a4^2\, a5^2 + 1518\, a1^3\, a3\, a4^2\, a5^2 + 6654\, a1^2\, a2\, a3\, a4^2\, a5^2 + 6654\, a1\, a2^2\, a3\, a4^2\, a5^2 +$
$1518\, a2^3\, a3\, a4^2\, a5^2 + 2859\, a1^2\, a3^2\, a4^2\, a5^2 + 6654\, a1\, a2\, a3^2\, a4^2\, a5^2 + 2859\, a2^2\, a3^2\, a4^2\, a5^2 +$
$1518\, a1\, a3^3\, a4^2\, a5^2 + 1518\, a2\, a3^3\, a4^2\, a5^2 + 177\, a3^4\, a4^2\, a5^2 + 331\, a1^3\, a4^3\, a5^2 +$
$1518\, a1^2\, a2\, a4^3\, a5^2 + 1518\, a1\, a2^2\, a4^3\, a5^2 + 331\, a2^3\, a4^3\, a5^2 + 1518\, a1^2\, a3\, a4^3\, a5^2 +$
$3565\, a1\, a2\, a3\, a4^3\, a5^2 + 1518\, a2^2\, a3\, a4^3\, a5^2 + 1518\, a1\, a3^2\, a4^3\, a5^2 + 1518\, a2\, a3^2\, a4^3\, a5^2 +$
$331\, a3^3\, a4^3\, a5^2 + 177\, a1^2\, a4^4\, a5^2 + 429\, a1\, a2\, a4^4\, a5^2 + 177\, a2^2\, a4^4\, a5^2 + 429\, a1\, a3\, a4^4\, a5^2 +$
$429\, a2\, a3\, a4^4\, a5^2 + 177\, a3^2\, a4^4\, a5^2 + 21\, a1\, a4^5\, a5^2 + 21\, a2\, a4^5\, a5^2 + 21\, a3\, a4^5\, a5^2 +$
$4\, a1^5\, a5^3 + 90\, a1^4\, a2\, a5^3 + 331\, a1^3\, a2^2\, a5^3 + 331\, a1^2\, a2^3\, a5^3 + 90\, a1\, a2^4\, a5^3 + 4\, a2^5\, a5^3 +$
$90\, a1^4\, a3\, a5^3 + 798\, a1^3\, a2\, a3\, a5^3 + 1518\, a1^2\, a2^2\, a3\, a5^3 + 798\, a1\, a2^3\, a3\, a5^3 + 90\, a2^4\, a3\, a5^3 +$
$331\, a1^3\, a3^2\, a5^3 + 1518\, a1^2\, a2\, a3^2\, a5^3 + 1518\, a1\, a2^2\, a3^2\, a5^3 + 331\, a2^3\, a3^2\, a5^3 +$
$331\, a1^2\, a3^3\, a5^3 + 798\, a1\, a2\, a3^3\, a5^3 + 331\, a2^2\, a3^3\, a5^3 + 90\, a1\, a3^4\, a5^3 + 90\, a2\, a3^4\, a5^3 +$
$4\, a3^5\, a5^3 + 90\, a1^4\, a4\, a5^3 + 798\, a1^3\, a2\, a4\, a5^3 + 1518\, a1^2\, a2^2\, a4\, a5^3 + 798\, a1\, a2^3\, a4\, a5^3 +$
$90\, a2^4\, a4\, a5^3 + 798\, a1^3\, a3\, a4\, a5^3 + 3565\, a1^2\, a2\, a3\, a4\, a5^3 + 3565\, a1\, a2^2\, a3\, a4\, a5^3 +$
$798\, a2^3\, a3\, a4\, a5^3 + 1518\, a1^2\, a3^2\, a4\, a5^3 + 3565\, a1\, a2\, a3^2\, a4\, a5^3 + 1518\, a2^2\, a3^2\, a4\, a5^3 +$
$798\, a1\, a3^3\, a4\, a5^3 + 798\, a2\, a3^3\, a4\, a5^3 + 90\, a3^4\, a4\, a5^3 + 331\, a1^3\, a4^2\, a5^3 + 1518\, a1^2\, a2\, a4^2\, a5^3 +$
$1518\, a1\, a2^2\, a4^2\, a5^3 + 331\, a2^3\, a4^2\, a5^3 + 1518\, a1^2\, a3\, a4^2\, a5^3 + 3565\, a1\, a2\, a3\, a4^2\, a5^3 +$
$1518\, a2^2\, a3\, a4^2\, a5^3 + 1518\, a1\, a3^2\, a4^2\, a5^3 + 1518\, a2\, a3^2\, a4^2\, a5^3 + 331\, a3^3\, a4^2\, a5^3 +$
$331\, a1^2\, a4^3\, a5^3 + 798\, a1\, a2\, a4^3\, a5^3 + 331\, a2^2\, a4^3\, a5^3 + 798\, a1\, a3\, a4^3\, a5^3 +$
$798\, a2\, a3\, a4^3\, a5^3 + 331\, a3^2\, a4^3\, a5^3 + 90\, a1\, a4^4\, a5^3 + 90\, a2\, a4^4\, a5^3 + 90\, a3\, a4^4\, a5^3 +$
$4\, a4^5\, a5^3 + 9\, a1^4\, a5^4 + 90\, a1^3\, a2\, a5^4 + 177\, a1^2\, a2^2\, a5^4 + 90\, a1\, a2^3\, a5^4 + 9\, a2^4\, a5^4 +$
$90\, a1^3\, a3\, a5^4 + 429\, a1^2\, a2\, a3\, a5^4 + 429\, a1\, a2^2\, a3\, a5^4 + 90\, a2^3\, a3\, a5^4 + 177\, a1^2\, a3^2\, a5^4 +$
$429\, a1\, a2\, a3^2\, a5^4 + 177\, a2^2\, a3^2\, a5^4 + 90\, a1\, a3^3\, a5^4 + 90\, a2\, a3^3\, a5^4 + 9\, a3^4\, a5^4 +$
$90\, a1^3\, a4\, a5^4 + 429\, a1^2\, a2\, a4\, a5^4 + 429\, a1\, a2^2\, a4\, a5^4 + 90\, a2^3\, a4\, a5^4 + 429\, a1^2\, a3\, a4\, a5^4 +$
$1023\, a1\, a2\, a3\, a4\, a5^4 + 429\, a2^2\, a3\, a4\, a5^4 + 429\, a1\, a3^2\, a4\, a5^4 + 429\, a2\, a3^2\, a4\, a5^4 +$
$90\, a3^3\, a4\, a5^4 + 177\, a1^2\, a4^2\, a5^4 + 429\, a1\, a2\, a4^2\, a5^4 + 177\, a2^2\, a4^2\, a5^4 + 429\, a1\, a3\, a4^2\, a5^4 +$
$429\, a2\, a3\, a4^2\, a5^4 + 177\, a3^2\, a4^2\, a5^4 + 90\, a1\, a4^3\, a5^4 + 90\, a2\, a4^3\, a5^4 + 90\, a3\, a4^3\, a5^4 +$
$9\, a4^4\, a5^4 + 4\, a1^3\, a5^5 + 21\, a1^2\, a2\, a5^5 + 21\, a1\, a2^2\, a5^5 + 4\, a2^3\, a5^5 + 21\, a1^2\, a3\, a5^5 +$
$52\, a1\, a2\, a3\, a5^5 + 21\, a2^2\, a3\, a5^5 + 21\, a1\, a3^2\, a5^5 + 21\, a2\, a3^2\, a5^5 + 4\, a3^3\, a5^5 + 21\, a1^2\, a4\, a5^5 +$
$52\, a1\, a2\, a4\, a5^5 + 21\, a2^2\, a4\, a5^5 + 52\, a1\, a3\, a4\, a5^5 + 52\, a2\, a3\, a4\, a5^5 + 21\, a3^2\, a4\, a5^5 +$
$21\, a1\, a4^2\, a5^5 + 21\, a2\, a4^2\, a5^5 + 21\, a3\, a4^2\, a5^5 + 4\, a4^3\, a5^5 + 21\, a1^5\, a2^2\, a6 + 90\, a1^4\, a2^3\, a6 +$
$90\, a1^3\, a2^4\, a6 + 21\, a1^2\, a2^5\, a6 + 52\, a1^5\, a2\, a3\, a6 + 429\, a1^4\, a2^2\, a3\, a6 + 798\, a1^3\, a2^3\, a3\, a6 +$
$429\, a1^2\, a2^4\, a3\, a6 + 52\, a1\, a2^5\, a3\, a6 + 21\, a1^5\, a3^2\, a6 + 429\, a1^4\, a2\, a3^2\, a6 + 1518\, a1^3\, a2^2\, a3^2\, a6 +$
$1518\, a1^2\, a2^3\, a3^2\, a6 + 429\, a1\, a2^4\, a3^2\, a6 + 21\, a2^5\, a3^2\, a6 + 90\, a1^4\, a3^3\, a6 + 798\, a1^3\, a2\, a3^3\, a6 +$
$1518\, a1^2\, a2^2\, a3^3\, a6 + 798\, a1\, a2^3\, a3^3\, a6 + 90\, a2^4\, a3^3\, a6 + 90\, a1^3\, a3^4\, a6 + 429\, a1^2\, a2\, a3^4\, a6 +$
$429\, a1\, a2^2\, a3^4\, a6 + 90\, a2^3\, a3^4\, a6 + 21\, a1^2\, a3^5\, a6 + 52\, a1\, a2\, a3^5\, a6 + 21\, a2^2\, a3^5\, a6 +$
$52\, a1^5\, a2\, a4\, a6 + 429\, a1^4\, a2^2\, a4\, a6 + 798\, a1^3\, a2^3\, a4\, a6 + 429\, a1^2\, a2^4\, a4\, a6 + 52\, a1\, a2^5\, a4\, a6 +$
$52\, a1^5\, a3\, a4\, a6 + 1023\, a1^4\, a2\, a3\, a4\, a6 + 3565\, a1^3\, a2^2\, a3\, a4\, a6 + 3565\, a1^2\, a2^3\, a3\, a4\, a6 +$
$1023\, a1\, a2^4\, a3\, a4\, a6 + 52\, a2^5\, a3\, a4\, a6 + 429\, a1^4\, a3^2\, a4\, a6 + 3565\, a1^3\, a2\, a3^2\, a4\, a6 +$
$6654\, a1^2\, a2^2\, a3^2\, a4\, a6 + 3565\, a1\, a2^3\, a3^2\, a4\, a6 + 429\, a2^4\, a3^2\, a4\, a6 + 798\, a1^3\, a3^3\, a4\, a6 +$
$3565\, a1^2\, a2\, a3^3\, a4\, a6 + 3565\, a1\, a2^2\, a3^3\, a4\, a6 + 798\, a2^3\, a3^3\, a4\, a6 + 429\, a1^2\, a3^4\, a4\, a6 +$

$1023\, a1\, a2\, a3^4\, a4\, a6 + 429\, a2^2\, a3^4\, a4\, a6 + 52\, a1\, a3^5\, a4\, a6 + 52\, a2\, a3^5\, a4\, a6 +$
$21\, a1^5\, a4^2\, a6 + 429\, a1^4\, a2\, a4^2\, a6 + 1518\, a1^3\, a2^2\, a4^2\, a6 + 1518\, a1^2\, a2^3\, a4^2\, a6 +$
$429\, a1\, a2^4\, a4^2\, a6 + 21\, a2^5\, a4^2\, a6 + 429\, a1^4\, a3\, a4^2\, a6 + 3565\, a1^3\, a2\, a3\, a4^2\, a6 +$
$6654\, a1^2\, a2^2\, a3\, a4^2\, a6 + 3565\, a1\, a2^3\, a3\, a4^2\, a6 + 429\, a2^4\, a3\, a4^2\, a6 + 1518\, a1^3\, a3^2\, a4^2\, a6 +$
$6654\, a1^2\, a2\, a3^2\, a4^2\, a6 + 6654\, a1\, a2^2\, a3^2\, a4^2\, a6 + 1518\, a2^3\, a3^2\, a4^2\, a6 + 1518\, a1^2\, a3^3\, a4^2\, a6 +$
$3565\, a1\, a2\, a3^3\, a4^2\, a6 + 1518\, a2^2\, a3^3\, a4^2\, a6 + 429\, a1\, a3^4\, a4^2\, a6 + 429\, a2\, a3^4\, a4^2\, a6 +$
$21\, a3^5\, a4^2\, a6 + 90\, a1^4\, a4^3\, a6 + 798\, a1^3\, a2\, a4^3\, a6 + 1518\, a1^2\, a2^2\, a4^3\, a6 + 798\, a1\, a2^3\, a4^3\, a6 +$
$90\, a2^4\, a4^3\, a6 + 798\, a1^3\, a3\, a4^3\, a6 + 3565\, a1^2\, a2\, a3\, a4^3\, a6 + 3565\, a1\, a2^2\, a3\, a4^3\, a6 +$
$798\, a2^3\, a3\, a4^3\, a6 + 1518\, a1^2\, a3^2\, a4^3\, a6 + 3565\, a1\, a2\, a3^2\, a4^3\, a6 + 1518\, a2^2\, a3^2\, a4^3\, a6 +$
$798\, a1\, a3^3\, a4^3\, a6 + 798\, a2\, a3^3\, a4^3\, a6 + 90\, a3^4\, a4^3\, a6 + 90\, a1^3\, a4^4\, a6 + 429\, a1^2\, a2\, a4^4\, a6 +$
$429\, a1\, a2^2\, a4^4\, a6 + 90\, a2^3\, a4^4\, a6 + 429\, a1^2\, a3\, a4^4\, a6 + 1023\, a1\, a2\, a3\, a4^4\, a6 +$
$429\, a2^2\, a3\, a4^4\, a6 + 429\, a1\, a3^2\, a4^4\, a6 + 429\, a2\, a3^2\, a4^4\, a6 + 90\, a3^3\, a4^4\, a6 + 21\, a1^2\, a4^5\, a6 +$
$52\, a1\, a2\, a4^5\, a6 + 21\, a2^2\, a4^5\, a6 + 52\, a1\, a3\, a4^5\, a6 + 52\, a2\, a3\, a4^5\, a6 + 21\, a3^2\, a4^5\, a6 +$
$52\, a1^5\, a2\, a5\, a6 + 429\, a1^4\, a2^2\, a5\, a6 + 798\, a1^3\, a2^3\, a5\, a6 + 429\, a1^2\, a2^4\, a5\, a6 +$
$52\, a1\, a2^5\, a5\, a6 + 52\, a1^5\, a3\, a5\, a6 + 1023\, a1^4\, a2\, a3\, a5\, a6 + 3565\, a1^3\, a2^2\, a3\, a5\, a6 +$
$3565\, a1^2\, a2^3\, a3\, a5\, a6 + 1023\, a1\, a2^4\, a3\, a5\, a6 + 52\, a2^5\, a3\, a5\, a6 + 429\, a1^4\, a3^2\, a5\, a6 +$
$3565\, a1^3\, a2\, a3^2\, a5\, a6 + 6654\, a1^2\, a2^2\, a3^2\, a5\, a6 + 3565\, a1\, a2^3\, a3^2\, a5\, a6 + 429\, a2^4\, a3^2\, a5\, a6 +$
$798\, a1^3\, a3^3\, a5\, a6 + 3565\, a1^2\, a2\, a3^3\, a5\, a6 + 3565\, a1\, a2^2\, a3^3\, a5\, a6 + 798\, a2^3\, a3^3\, a5\, a6 +$
$429\, a1^2\, a3^4\, a5\, a6 + 1023\, a1\, a2\, a3^4\, a5\, a6 + 429\, a2^2\, a3^4\, a5\, a6 + 52\, a1\, a3^5\, a5\, a6 +$
$52\, a2\, a3^5\, a5\, a6 + 52\, a1^5\, a4\, a5\, a6 + 1023\, a1^4\, a2\, a4\, a5\, a6 + 3565\, a1^3\, a2^2\, a4\, a5\, a6 +$
$3565\, a1^2\, a2^3\, a4\, a5\, a6 + 1023\, a1\, a2^4\, a4\, a5\, a6 + 52\, a2^5\, a4\, a5\, a6 + 1023\, a1^4\, a3\, a4\, a5\, a6 +$
$8220\, a1^3\, a2\, a3\, a4\, a5\, a6 + 15\,198\, a1^2\, a2^2\, a3\, a4\, a5\, a6 + 8220\, a1\, a2^3\, a3\, a4\, a5\, a6 +$
$1023\, a2^4\, a3\, a4\, a5\, a6 + 3565\, a1^3\, a3^2\, a4\, a5\, a6 + 15\,198\, a1^2\, a2\, a3^2\, a4\, a5\, a6 +$
$15\,198\, a1\, a2^2\, a3^2\, a4\, a5\, a6 + 3565\, a2^3\, a3^2\, a4\, a5\, a6 + 3565\, a1^2\, a3^3\, a4\, a5\, a6 +$
$8220\, a1\, a2\, a3^3\, a4\, a5\, a6 + 3565\, a2^2\, a3^3\, a4\, a5\, a6 + 1023\, a1\, a3^4\, a4\, a5\, a6 +$
$1023\, a2\, a3^4\, a4\, a5\, a6 + 52\, a3^5\, a4\, a5\, a6 + 429\, a1^4\, a4^2\, a5\, a6 + 3565\, a1^3\, a2\, a4^2\, a5\, a6 +$
$6654\, a1^2\, a2^2\, a4^2\, a5\, a6 + 3565\, a1\, a2^3\, a4^2\, a5\, a6 + 429\, a2^4\, a4^2\, a5\, a6 + 3565\, a1^3\, a3\, a4^2\, a5\, a6 +$
$15\,198\, a1^2\, a2\, a3\, a4^2\, a5\, a6 + 15\,198\, a1\, a2^2\, a3\, a4^2\, a5\, a6 + 3565\, a2^3\, a3\, a4^2\, a5\, a6 +$
$6654\, a1^2\, a3^2\, a4^2\, a5\, a6 + 15\,198\, a1\, a2\, a3^2\, a4^2\, a5\, a6 + 6654\, a2^2\, a3^2\, a4^2\, a5\, a6 +$
$3565\, a1\, a3^3\, a4^2\, a5\, a6 + 3565\, a2\, a3^3\, a4^2\, a5\, a6 + 429\, a3^4\, a4^2\, a5\, a6 + 798\, a1^3\, a4^3\, a5\, a6 +$
$3565\, a1^2\, a2\, a4^3\, a5\, a6 + 3565\, a1\, a2^2\, a4^3\, a5\, a6 + 798\, a2^3\, a4^3\, a5\, a6 + 3565\, a1^2\, a3\, a4^3\, a5\, a6 +$
$8220\, a1\, a2\, a3\, a4^3\, a5\, a6 + 3565\, a2^2\, a3\, a4^3\, a5\, a6 + 3565\, a1\, a3^2\, a4^3\, a5\, a6 +$
$3565\, a2\, a3^2\, a4^3\, a5\, a6 + 798\, a3^3\, a4^3\, a5\, a6 + 429\, a1^2\, a4^4\, a5\, a6 + 1023\, a1\, a2\, a4^4\, a5\, a6 +$
$429\, a2^2\, a4^4\, a5\, a6 + 1023\, a1\, a3\, a4^4\, a5\, a6 + 1023\, a2\, a3\, a4^4\, a5\, a6 + 429\, a3^2\, a4^4\, a5\, a6 +$
$52\, a1\, a4^5\, a5\, a6 + 52\, a2\, a4^5\, a5\, a6 + 52\, a3\, a4^5\, a5\, a6 + 21\, a1^5\, a5^2\, a6 + 429\, a1^4\, a2\, a5^2\, a6 +$
$1518\, a1^3\, a2^2\, a5^2\, a6 + 1518\, a1^2\, a2^3\, a5^2\, a6 + 429\, a1\, a2^4\, a5^2\, a6 + 21\, a2^5\, a5^2\, a6 +$
$429\, a1^4\, a3\, a5^2\, a6 + 3565\, a1^3\, a2\, a3\, a5^2\, a6 + 6654\, a1^2\, a2^2\, a3\, a5^2\, a6 + 3565\, a1\, a2^3\, a3\, a5^2\, a6 +$
$429\, a2^4\, a3\, a5^2\, a6 + 1518\, a1^3\, a3^2\, a5^2\, a6 + 6654\, a1^2\, a2\, a3^2\, a5^2\, a6 + 6654\, a1\, a2^2\, a3^2\, a5^2\, a6 +$
$1518\, a2^3\, a3^2\, a5^2\, a6 + 1518\, a1^2\, a3^3\, a5^2\, a6 + 3565\, a1\, a2\, a3^3\, a5^2\, a6 + 1518\, a2^2\, a3^3\, a5^2\, a6 +$
$429\, a1\, a3^4\, a5^2\, a6 + 429\, a2\, a3^4\, a5^2\, a6 + 21\, a3^5\, a5^2\, a6 + 429\, a1^4\, a4\, a5^2\, a6 +$
$3565\, a1^3\, a2\, a4\, a5^2\, a6 + 6654\, a1^2\, a2^2\, a4\, a5^2\, a6 + 3565\, a1\, a2^3\, a4\, a5^2\, a6 + 429\, a2^4\, a4\, a5^2\, a6 +$
$3565\, a1^3\, a3\, a4\, a5^2\, a6 + 15\,198\, a1^2\, a2\, a3\, a4\, a5^2\, a6 + 15\,198\, a1\, a2^2\, a3\, a4\, a5^2\, a6 +$
$3565\, a2^3\, a3\, a4\, a5^2\, a6 + 6654\, a1^2\, a3^2\, a4\, a5^2\, a6 + 15\,198\, a1\, a2\, a3^2\, a4\, a5^2\, a6 +$
$6654\, a2^2\, a3^2\, a4\, a5^2\, a6 + 3565\, a1\, a3^3\, a4\, a5^2\, a6 + 3565\, a2\, a3^3\, a4\, a5^2\, a6 +$
$429\, a3^4\, a4\, a5^2\, a6 + 1518\, a1^3\, a4^2\, a5^2\, a6 + 6654\, a1^2\, a2\, a4^2\, a5^2\, a6 + 6654\, a1\, a2^2\, a4^2\, a5^2\, a6 +$
$1518\, a2^3\, a4^2\, a5^2\, a6 + 6654\, a1^2\, a3\, a4^2\, a5^2\, a6 + 15\,198\, a1\, a2\, a3\, a4^2\, a5^2\, a6 +$
$6654\, a2^2\, a3\, a4^2\, a5^2\, a6 + 6654\, a1\, a3^2\, a4^2\, a5^2\, a6 + 6654\, a2\, a3^2\, a4^2\, a5^2\, a6 +$

$1518\, a3^3\, a4^2\, a5^2\, a6 + 1518\, a1^2\, a4^3\, a5^2\, a6 + 3565\, a1\, a2\, a4^3\, a5^2\, a6 + 1518\, a2^2\, a4^3\, a5^2\, a6 +$
$3565\, a1\, a3\, a4^3\, a5^2\, a6 + 3565\, a2\, a3\, a4^3\, a5^2\, a6 + 1518\, a3^2\, a4^3\, a5^2\, a6 + 429\, a1\, a4^4\, a5^2\, a6 +$
$429\, a2\, a4^4\, a5^2\, a6 + 429\, a3\, a4^4\, a5^2\, a6 + 21\, a4^5\, a5^2\, a6 + 90\, a1^4\, a5^3\, a6 + 798\, a1^3\, a2\, a5^3\, a6 +$
$1518\, a1^2\, a2^2\, a5^3\, a6 + 798\, a1\, a2^3\, a5^3\, a6 + 90\, a2^4\, a5^3\, a6 + 798\, a1^3\, a3\, a5^3\, a6 +$
$3565\, a1^2\, a2\, a3\, a5^3\, a6 + 3565\, a1\, a2^2\, a3\, a5^3\, a6 + 798\, a2^3\, a3\, a5^3\, a6 + 1518\, a1^2\, a3^2\, a5^3\, a6 +$
$3565\, a1\, a2\, a3^2\, a5^3\, a6 + 1518\, a2^2\, a3^2\, a5^3\, a6 + 798\, a1\, a3^3\, a5^3\, a6 + 798\, a2\, a3^3\, a5^3\, a6 +$
$90\, a3^4\, a5^3\, a6 + 798\, a1^3\, a4\, a5^3\, a6 + 3565\, a1^2\, a2\, a4\, a5^3\, a6 + 3565\, a1\, a2^2\, a4\, a5^3\, a6 +$
$798\, a2^3\, a4\, a5^3\, a6 + 3565\, a1^2\, a3\, a4\, a5^3\, a6 + 8220\, a1\, a2\, a3\, a4\, a5^3\, a6 + 3565\, a2^2\, a3\, a4\, a5^3\, a6 +$
$3565\, a1\, a3^2\, a4\, a5^3\, a6 + 3565\, a2\, a3^2\, a4\, a5^3\, a6 + 798\, a3^3\, a4\, a5^3\, a6 + 1518\, a1^2\, a4^2\, a5^3\, a6 +$
$3565\, a1\, a2\, a4^2\, a5^3\, a6 + 1518\, a2^2\, a4^2\, a5^3\, a6 + 3565\, a1\, a3\, a4^2\, a5^3\, a6 + 3565\, a2\, a3\, a4^2\, a5^3\, a6 +$
$1518\, a3^2\, a4^2\, a5^3\, a6 + 798\, a1\, a4^3\, a5^3\, a6 + 798\, a2\, a4^3\, a5^3\, a6 + 798\, a3\, a4^3\, a5^3\, a6 +$
$90\, a4^4\, a5^3\, a6 + 90\, a1^3\, a5^4\, a6 + 429\, a1^2\, a2\, a5^4\, a6 + 429\, a1\, a2^2\, a5^4\, a6 + 90\, a2^3\, a5^4\, a6 +$
$429\, a1^2\, a3\, a5^4\, a6 + 1023\, a1\, a2\, a3\, a5^4\, a6 + 429\, a2^2\, a3\, a5^4\, a6 + 429\, a1\, a3^2\, a5^4\, a6 +$
$429\, a2\, a3^2\, a5^4\, a6 + 90\, a3^3\, a5^4\, a6 + 429\, a1^2\, a4\, a5^4\, a6 + 1023\, a1\, a2\, a4\, a5^4\, a6 +$
$429\, a2^2\, a4\, a5^4\, a6 + 1023\, a1\, a3\, a4\, a5^4\, a6 + 1023\, a2\, a3\, a4\, a5^4\, a6 + 429\, a3^2\, a4\, a5^4\, a6 +$
$429\, a1\, a4^2\, a5^4\, a6 + 429\, a2\, a4^2\, a5^4\, a6 + 429\, a3\, a4^2\, a5^4\, a6 + 90\, a4^3\, a5^4\, a6 +$
$21\, a1^2\, a5^5\, a6 + 52\, a1\, a2\, a5^5\, a6 + 21\, a2^2\, a5^5\, a6 + 52\, a1\, a3\, a5^5\, a6 + 52\, a2\, a3\, a5^5\, a6 +$
$21\, a3^2\, a5^5\, a6 + 52\, a1\, a4\, a5^5\, a6 + 52\, a2\, a4\, a5^5\, a6 + 52\, a3\, a4\, a5^5\, a6 + 21\, a4^2\, a5^5\, a6 +$
$21\, a1^5\, a2\, a6^2 + 177\, a1^4\, a2^2\, a6^2 + 331\, a1^3\, a2^3\, a6^2 + 177\, a1^2\, a2^4\, a6^2 + 21\, a1\, a2^5\, a6^2 +$
$21\, a1^5\, a3\, a6^2 + 429\, a1^4\, a2\, a3\, a6^2 + 1518\, a1^3\, a2^2\, a3\, a6^2 + 1518\, a1^2\, a2^3\, a3\, a6^2 +$
$429\, a1\, a2^4\, a3\, a6^2 + 21\, a2^5\, a3\, a6^2 + 177\, a1^4\, a3^2\, a6^2 + 1518\, a1^3\, a2\, a3^2\, a6^2 +$
$2859\, a1^2\, a2^2\, a3^2\, a6^2 + 1518\, a1\, a2^3\, a3^2\, a6^2 + 177\, a2^4\, a3^2\, a6^2 + 331\, a1^3\, a3^3\, a6^2 +$
$1518\, a1^2\, a2\, a3^3\, a6^2 + 1518\, a1\, a2^2\, a3^3\, a6^2 + 331\, a2^3\, a3^3\, a6^2 + 177\, a1^2\, a3^4\, a6^2 +$
$429\, a1\, a2\, a3^4\, a6^2 + 177\, a2^2\, a3^4\, a6^2 + 21\, a1\, a3^5\, a6^2 + 21\, a2\, a3^5\, a6^2 + 21\, a1^5\, a4\, a6^2 +$
$429\, a1^4\, a2\, a4\, a6^2 + 1518\, a1^3\, a2^2\, a4\, a6^2 + 1518\, a1^2\, a2^3\, a4\, a6^2 + 429\, a1\, a2^4\, a4\, a6^2 +$
$21\, a2^5\, a4\, a6^2 + 429\, a1^4\, a3\, a4\, a6^2 + 3565\, a1^3\, a2\, a3\, a4\, a6^2 + 6654\, a1^2\, a2^2\, a3\, a4\, a6^2 +$
$3565\, a1\, a2^3\, a3\, a4\, a6^2 + 429\, a2^4\, a3\, a4\, a6^2 + 1518\, a1^3\, a3^2\, a4\, a6^2 + 6654\, a1^2\, a2\, a3^2\, a4\, a6^2 +$
$6654\, a1\, a2^2\, a3^2\, a4\, a6^2 + 1518\, a2^3\, a3^2\, a4\, a6^2 + 1518\, a1^2\, a3^3\, a4\, a6^2 + 3565\, a1\, a2\, a3^3\, a4\, a6^2 +$
$1518\, a2^2\, a3^3\, a4\, a6^2 + 429\, a1\, a3^4\, a4\, a6^2 + 429\, a2\, a3^4\, a4\, a6^2 + 21\, a3^5\, a4\, a6^2 +$
$177\, a1^4\, a4^2\, a6^2 + 1518\, a1^3\, a2\, a4^2\, a6^2 + 2859\, a1^2\, a2^2\, a4^2\, a6^2 + 1518\, a1\, a2^3\, a4^2\, a6^2 +$
$177\, a2^4\, a4^2\, a6^2 + 1518\, a1^3\, a3\, a4^2\, a6^2 + 6654\, a1^2\, a2\, a3\, a4^2\, a6^2 + 6654\, a1\, a2^2\, a3\, a4^2\, a6^2 +$
$1518\, a2^3\, a3\, a4^2\, a6^2 + 2859\, a1^2\, a3^2\, a4^2\, a6^2 + 6654\, a1\, a2\, a3^2\, a4^2\, a6^2 + 2859\, a2^2\, a3^2\, a4^2\, a6^2 +$
$1518\, a1\, a3^3\, a4^2\, a6^2 + 1518\, a2\, a3^3\, a4^2\, a6^2 + 177\, a3^4\, a4^2\, a6^2 + 331\, a1^3\, a4^3\, a6^2 +$
$1518\, a1^2\, a2\, a4^3\, a6^2 + 1518\, a1\, a2^2\, a4^3\, a6^2 + 331\, a2^3\, a4^3\, a6^2 + 1518\, a1^2\, a3\, a4^3\, a6^2 +$
$3565\, a1\, a2\, a3\, a4^3\, a6^2 + 1518\, a2^2\, a3\, a4^3\, a6^2 + 1518\, a1\, a3^2\, a4^3\, a6^2 + 1518\, a2\, a3^2\, a4^3\, a6^2 +$
$331\, a3^3\, a4^3\, a6^2 + 177\, a1^2\, a4^4\, a6^2 + 429\, a1\, a2\, a4^4\, a6^2 + 177\, a2^2\, a4^4\, a6^2 + 429\, a1\, a3\, a4^4\, a6^2 +$
$429\, a2\, a3\, a4^4\, a6^2 + 177\, a3^2\, a4^4\, a6^2 + 21\, a1\, a4^5\, a6^2 + 21\, a2\, a4^5\, a6^2 + 21\, a3\, a4^5\, a6^2 +$
$21\, a1^5\, a5\, a6^2 + 429\, a1^4\, a2\, a5\, a6^2 + 1518\, a1^3\, a2^2\, a5\, a6^2 + 1518\, a1^2\, a2^3\, a5\, a6^2 +$
$429\, a1\, a2^4\, a5\, a6^2 + 21\, a2^5\, a5\, a6^2 + 429\, a1^4\, a3\, a5\, a6^2 + 3565\, a1^3\, a2\, a3\, a5\, a6^2 +$
$6654\, a1^2\, a2^2\, a3\, a5\, a6^2 + 3565\, a1\, a2^3\, a3\, a5\, a6^2 + 429\, a2^4\, a3\, a5\, a6^2 + 1518\, a1^3\, a3^2\, a5\, a6^2 +$
$6654\, a1^2\, a2\, a3^2\, a5\, a6^2 + 6654\, a1\, a2^2\, a3^2\, a5\, a6^2 + 1518\, a2^3\, a3^2\, a5\, a6^2 +$
$1518\, a1^2\, a3^3\, a5\, a6^2 + 3565\, a1\, a2\, a3^3\, a5\, a6^2 + 1518\, a2^2\, a3^3\, a5\, a6^2 + 429\, a1\, a3^4\, a5\, a6^2 +$
$429\, a2\, a3^4\, a5\, a6^2 + 21\, a3^5\, a5\, a6^2 + 429\, a1^4\, a4\, a5\, a6^2 + 3565\, a1^3\, a2\, a4\, a5\, a6^2 +$
$6654\, a1^2\, a2^2\, a4\, a5\, a6^2 + 3565\, a1\, a2^3\, a4\, a5\, a6^2 + 429\, a2^4\, a4\, a5\, a6^2 + 3565\, a1^3\, a3\, a4\, a5\, a6^2 +$
$15\,198\, a1^2\, a2\, a3\, a4\, a5\, a6^2 + 15\,198\, a1\, a2^2\, a3\, a4\, a5\, a6^2 + 3565\, a2^3\, a3\, a4\, a5\, a6^2 +$
$6654\, a1^2\, a3^2\, a4\, a5\, a6^2 + 15\,198\, a1\, a2\, a3^2\, a4\, a5\, a6^2 + 6654\, a2^2\, a3^2\, a4\, a5\, a6^2 +$
$3565\, a1\, a3^3\, a4\, a5\, a6^2 + 3565\, a2\, a3^3\, a4\, a5\, a6^2 + 429\, a3^4\, a4\, a5\, a6^2 + 1518\, a1^3\, a4^2\, a5\, a6^2 +$

$6654\, a1^2\, a2\, a4^2\, a5\, a6^2 + 6654\, a1\, a2^2\, a4^2\, a5\, a6^2 + 1518\, a2^3\, a4^2\, a5\, a6^2 +$
$6654\, a1^2\, a3\, a4^2\, a5\, a6^2 + 15\,198\, a1\, a2\, a3\, a4^2\, a5\, a6^2 + 6654\, a2^2\, a3\, a4^2\, a5\, a6^2 +$
$6654\, a1\, a3^2\, a4^2\, a5\, a6^2 + 6654\, a2\, a3^2\, a4^2\, a5\, a6^2 + 1518\, a3^3\, a4^2\, a5\, a6^2 +$
$1518\, a1^2\, a4^3\, a5\, a6^2 + 3565\, a1\, a2\, a4^3\, a5\, a6^2 + 1518\, a2^2\, a4^3\, a5\, a6^2 + 3565\, a1\, a3\, a4^3\, a5\, a6^2 +$
$3565\, a2\, a3\, a4^3\, a5\, a6^2 + 1518\, a3^2\, a4^3\, a5\, a6^2 + 429\, a1\, a4^4\, a5\, a6^2 + 429\, a2\, a4^4\, a5\, a6^2 +$
$429\, a3\, a4^4\, a5\, a6^2 + 21\, a4^5\, a5\, a6^2 + 177\, a1^4\, a5^2\, a6^2 + 1518\, a1^3\, a2\, a5^2\, a6^2 +$
$2859\, a1^2\, a2^2\, a5^2\, a6^2 + 1518\, a1\, a2^3\, a5^2\, a6^2 + 177\, a2^4\, a5^2\, a6^2 + 1518\, a1^3\, a3\, a5^2\, a6^2 +$
$6654\, a1^2\, a2\, a3\, a5^2\, a6^2 + 6654\, a1\, a2^2\, a3\, a5^2\, a6^2 + 1518\, a2^3\, a3\, a5^2\, a6^2 + 2859\, a1^2\, a3^2\, a5^2\, a6^2 +$
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$177\, a3^4\, a5^2\, a6^2 + 1518\, a1^3\, a4\, a5^2\, a6^2 + 6654\, a1^2\, a2\, a4\, a5^2\, a6^2 + 6654\, a1\, a2^2\, a4\, a5^2\, a6^2 +$
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$1518\, a3^3\, a4\, a5^2\, a6^2 + 2859\, a1^2\, a4^2\, a5^2\, a6^2 + 6654\, a1\, a2\, a4^2\, a5^2\, a6^2 + 2859\, a2^2\, a4^2\, a5^2\, a6^2 +$
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$1518\, a1^2\, a2\, a5^3\, a6^2 + 1518\, a1\, a2^2\, a5^3\, a6^2 + 331\, a2^3\, a5^3\, a6^2 + 1518\, a1^2\, a3\, a5^3\, a6^2 +$
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$1518\, a2\, a4^2\, a5^3\, a6^2 + 1518\, a3\, a4^2\, a5^3\, a6^2 + 331\, a4^3\, a5^3\, a6^2 + 177\, a1^2\, a5^4\, a6^2 +$
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$4\, a1^5\, a6^3 + 90\, a1^4\, a2\, a6^3 + 331\, a1^3\, a2^2\, a6^3 + 331\, a1^2\, a2^3\, a6^3 + 90\, a1\, a2^4\, a6^3 +$
$4\, a2^5\, a6^3 + 90\, a1^4\, a3\, a6^3 + 798\, a1^3\, a2\, a3\, a6^3 + 1518\, a1^2\, a2^2\, a3\, a6^3 + 798\, a1\, a2^3\, a3\, a6^3 +$
$90\, a2^4\, a3\, a6^3 + 331\, a1^3\, a3^2\, a6^3 + 1518\, a1^2\, a2\, a3^2\, a6^3 + 1518\, a1\, a2^2\, a3^2\, a6^3 +$
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$3565\, a1\, a2^2\, a3\, a4\, a6^3 + 798\, a2^3\, a3\, a4\, a6^3 + 1518\, a1^2\, a3^2\, a4\, a6^3 + 3565\, a1\, a2\, a3^2\, a4\, a6^3 +$
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$331\, a2^2\, a4^3\, a6^3 + 798\, a1\, a3\, a4^3\, a6^3 + 798\, a2\, a3\, a4^3\, a6^3 + 331\, a3^2\, a4^3\, a6^3 + 90\, a1\, a4^4\, a6^3 +$
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$3565\, a1\, a2\, a4^2\, a5\, a6^3 + 1518\, a2^2\, a4^2\, a5\, a6^3 + 3565\, a1\, a3\, a4^2\, a5\, a6^3 + 3565\, a2\, a3\, a4^2\, a5\, a6^3 +$
$1518\, a3^2\, a4^2\, a5\, a6^3 + 798\, a1\, a4^3\, a5\, a6^3 + 798\, a2\, a4^3\, a5\, a6^3 + 798\, a3\, a4^3\, a5\, a6^3 +$
$90\, a4^4\, a5\, a6^3 + 331\, a1^3\, a5^2\, a6^3 + 1518\, a1^2\, a2\, a5^2\, a6^3 + 1518\, a1\, a2^2\, a5^2\, a6^3 +$
$331\, a2^3\, a5^2\, a6^3 + 1518\, a1^2\, a3\, a5^2\, a6^3 + 3565\, a1\, a2\, a3\, a5^2\, a6^3 + 1518\, a2^2\, a3\, a5^2\, a6^3 +$
$1518\, a1\, a3^2\, a5^2\, a6^3 + 1518\, a2\, a3^2\, a5^2\, a6^3 + 331\, a3^3\, a5^2\, a6^3 + 1518\, a1^2\, a4\, a5^2\, a6^3 +$

$3565\, a1\, a2\, a4\, a5^2\, a6^3 + 1518\, a2^2\, a4\, a5^2\, a6^3 + 3565\, a1\, a3\, a4\, a5^2\, a6^3 + 3565\, a2\, a3\, a4\, a5^2\, a6^3 +$
$1518\, a3^2\, a4\, a5^2\, a6^3 + 1518\, a1\, a4^2\, a5^2\, a6^3 + 1518\, a2\, a4^2\, a5^2\, a6^3 + 1518\, a3\, a4^2\, a5^2\, a6^3 +$
$331\, a4^3\, a5^2\, a6^3 + 331\, a1^2\, a5^3\, a6^3 + 798\, a1\, a2\, a5^3\, a6^3 + 331\, a2^2\, a5^3\, a6^3 + 798\, a1\, a3\, a5^3\, a6^3 +$
$798\, a2\, a3\, a5^3\, a6^3 + 331\, a3^2\, a5^3\, a6^3 + 798\, a1\, a4\, a5^3\, a6^3 + 798\, a2\, a4\, a5^3\, a6^3 +$
$798\, a3\, a4\, a5^3\, a6^3 + 331\, a4^2\, a5^3\, a6^3 + 90\, a1\, a5^4\, a6^3 + 90\, a2\, a5^4\, a6^3 + 90\, a3\, a5^4\, a6^3 +$
$90\, a4\, a5^4\, a6^3 + 4\, a5^5\, a6^3 + 9\, a1^4\, a6^4 + 90\, a1^3\, a2\, a6^4 + 177\, a1^2\, a2^2\, a6^4 + 90\, a1\, a2^3\, a6^4 +$
$9\, a2^4\, a6^4 + 90\, a1^3\, a3\, a6^4 + 429\, a1^2\, a2\, a3\, a6^4 + 429\, a1\, a2^2\, a3\, a6^4 + 90\, a2^3\, a3\, a6^4 +$
$177\, a1^2\, a3^2\, a6^4 + 429\, a1\, a2\, a3^2\, a6^4 + 177\, a2^2\, a3^2\, a6^4 + 90\, a1\, a3^3\, a6^4 + 90\, a2\, a3^3\, a6^4 +$
$9\, a3^4\, a6^4 + 90\, a1^3\, a4\, a6^4 + 429\, a1^2\, a2\, a4\, a6^4 + 429\, a1\, a2^2\, a4\, a6^4 + 90\, a2^3\, a4\, a6^4 +$
$429\, a1^2\, a3\, a4\, a6^4 + 1023\, a1\, a2\, a3\, a4\, a6^4 + 429\, a2^2\, a3\, a4\, a6^4 + 429\, a1\, a3^2\, a4\, a6^4 +$
$429\, a2\, a3^2\, a4\, a6^4 + 90\, a3^3\, a4\, a6^4 + 177\, a1^2\, a4^2\, a6^4 + 429\, a1\, a2\, a4^2\, a6^4 + 177\, a2^2\, a4^2\, a6^4 +$
$429\, a1\, a3\, a4^2\, a6^4 + 429\, a2\, a3\, a4^2\, a6^4 + 177\, a3^2\, a4^2\, a6^4 + 90\, a1\, a4^3\, a6^4 + 90\, a2\, a4^3\, a6^4 +$
$90\, a3\, a4^3\, a6^4 + 9\, a4^4\, a6^4 + 90\, a1^3\, a5\, a6^4 + 429\, a1^2\, a2\, a5\, a6^4 + 429\, a1\, a2^2\, a5\, a6^4 +$
$90\, a2^3\, a5\, a6^4 + 429\, a1^2\, a3\, a5\, a6^4 + 1023\, a1\, a2\, a3\, a5\, a6^4 + 429\, a2^2\, a3\, a5\, a6^4 +$
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$429\, a3^2\, a4\, a5\, a6^4 + 429\, a1\, a4^2\, a5\, a6^4 + 429\, a2\, a4^2\, a5\, a6^4 + 429\, a3\, a4^2\, a5\, a6^4 +$
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$429\, a3\, a4\, a5^2\, a6^4 + 177\, a4^2\, a5^2\, a6^4 + 90\, a1\, a5^3\, a6^4 + 90\, a2\, a5^3\, a6^4 + 90\, a3\, a5^3\, a6^4 +$
$90\, a4\, a5^3\, a6^4 + 9\, a5^4\, a6^4 + 4\, a1^3\, a6^5 + 21\, a1^2\, a2\, a6^5 + 21\, a1\, a2^2\, a6^5 + 4\, a2^3\, a6^5 +$
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$4\, a3^3\, a6^5 + 21\, a1^2\, a4\, a6^5 + 52\, a1\, a2\, a4\, a6^5 + 21\, a2^2\, a4\, a6^5 + 52\, a1\, a3\, a4\, a6^5 +$
$52\, a2\, a3\, a4\, a6^5 + 21\, a3^2\, a4\, a6^5 + 21\, a1\, a4^2\, a6^5 + 21\, a2\, a4^2\, a6^5 + 21\, a3\, a4^2\, a6^5 +$
$4\, a4^3\, a6^5 + 21\, a1^2\, a5\, a6^5 + 52\, a1\, a2\, a5\, a6^5 + 21\, a2^2\, a5\, a6^5 + 52\, a1\, a3\, a5\, a6^5 +$
$52\, a2\, a3\, a5\, a6^5 + 21\, a3^2\, a5\, a6^5 + 52\, a1\, a4\, a5\, a6^5 + 52\, a2\, a4\, a5\, a6^5 + 52\, a3\, a4\, a5\, a6^5 +$
$21\, a4^2\, a5\, a6^5 + 21\, a1\, a5^2\, a6^5 + 21\, a2\, a5^2\, a6^5 + 21\, a3\, a5^2\, a6^5 + 21\, a4\, a5^2\, a6^5 + 4\, a5^3\, a6^5$

In[43]:=
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G7 = SeriesCoefficient[%41, {t, 0, 7}]
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Out[43]=

$6\, a1^5\, a2^2 + 26\, a1^4\, a2^3 + 26\, a1^3\, a2^4 + 6\, a1^2\, a2^5 + 15\, a1^5\, a2\, a3 + 126\, a1^4\, a2^2\, a3 + 236\, a1^3\, a2^3\, a3 +$
$126\, a1^2\, a2^4\, a3 + 15\, a1\, a2^5\, a3 + 6\, a1^5\, a3^2 + 126\, a1^4\, a2\, a3^2 + 453\, a1^3\, a2^2\, a3^2 +$
$453\, a1^2\, a2^3\, a3^2 + 126\, a1\, a2^4\, a3^2 + 6\, a2^5\, a3^2 + 26\, a1^4\, a3^3 + 236\, a1^3\, a2\, a3^3 + 453\, a1^2\, a2^2\, a3^3 +$
$236\, a1\, a2^3\, a3^3 + 26\, a2^4\, a3^3 + 26\, a1^3\, a3^4 + 126\, a1^2\, a2\, a3^4 + 126\, a1\, a2^2\, a3^4 + 26\, a2^3\, a3^4 +$
$6\, a1^2\, a3^5 + 15\, a1\, a2\, a3^5 + 6\, a2^2\, a3^5 + 15\, a1^5\, a2\, a4 + 126\, a1^4\, a2^2\, a4 + 236\, a1^3\, a2^3\, a4 +$
$126\, a1^2\, a2^4\, a4 + 15\, a1\, a2^5\, a4 + 15\, a1^5\, a3\, a4 + 305\, a1^4\, a2\, a3\, a4 + 1082\, a1^3\, a2^2\, a3\, a4 +$
$1082\, a1^2\, a2^3\, a3\, a4 + 305\, a1\, a2^4\, a3\, a4 + 15\, a2^5\, a3\, a4 + 126\, a1^4\, a3^2\, a4 + 1082\, a1^3\, a2\, a3^2\, a4 +$
$2043\, a1^2\, a2^2\, a3^2\, a4 + 1082\, a1\, a2^3\, a3^2\, a4 + 126\, a2^4\, a3^2\, a4 + 236\, a1^3\, a3^3\, a4 +$
$1082\, a1^2\, a2\, a3^3\, a4 + 1082\, a1\, a2^2\, a3^3\, a4 + 236\, a2^3\, a3^3\, a4 + 126\, a1^2\, a3^4\, a4 +$
$305\, a1\, a2\, a3^4\, a4 + 126\, a2^2\, a3^4\, a4 + 15\, a1\, a3^5\, a4 + 15\, a2\, a3^5\, a4 + 6\, a1^5\, a4^2 + 126\, a1^4\, a2\, a4^2 +$
$453\, a1^3\, a2^2\, a4^2 + 453\, a1^2\, a2^3\, a4^2 + 126\, a1\, a2^4\, a4^2 + 6\, a2^5\, a4^2 + 126\, a1^4\, a3\, a4^2 +$
$1082\, a1^3\, a2\, a3\, a4^2 + 2043\, a1^2\, a2^2\, a3\, a4^2 + 1082\, a1\, a2^3\, a3\, a4^2 + 126\, a2^4\, a3\, a4^2 +$
$453\, a1^3\, a3^2\, a4^2 + 2043\, a1^2\, a2\, a3^2\, a4^2 + 2043\, a1\, a2^2\, a3^2\, a4^2 + 453\, a2^3\, a3^2\, a4^2 +$
$453\, a1^2\, a3^3\, a4^2 + 1082\, a1\, a2\, a3^3\, a4^2 + 453\, a2^2\, a3^3\, a4^2 + 126\, a1\, a3^4\, a4^2 + 126\, a2\, a3^4\, a4^2 +$
$6\, a3^5\, a4^2 + 26\, a1^4\, a4^3 + 236\, a1^3\, a2\, a4^3 + 453\, a1^2\, a2^2\, a4^3 + 236\, a1\, a2^3\, a4^3 + 26\, a2^4\, a4^3 +$
$236\, a1^3\, a3\, a4^3 + 1082\, a1^2\, a2\, a3\, a4^3 + 1082\, a1\, a2^2\, a3\, a4^3 + 236\, a2^3\, a3\, a4^3 + 453\, a1^2\, a3^2\, a4^3 +$
$1082\, a1\, a2\, a3^2\, a4^3 + 453\, a2^2\, a3^2\, a4^3 + 236\, a1\, a3^3\, a4^3 + 236\, a2\, a3^3\, a4^3 + 26\, a3^4\, a4^3 +$
$26\, a1^3\, a4^4 + 126\, a1^2\, a2\, a4^4 + 126\, a1\, a2^2\, a4^4 + 26\, a2^3\, a4^4 + 126\, a1^2\, a3\, a4^4 + 305\, a1\, a2\, a3\, a4^4 +$

$126\, a2^2\, a3\, a4^4 + 126\, a1\, a3^2\, a4^4 + 126\, a2\, a3^2\, a4^4 + 26\, a3^3\, a4^4 + 6\, a1^2\, a4^5 + 15\, a1\, a2\, a4^5 +$
$6\, a2^2\, a4^5 + 15\, a1\, a3\, a4^5 + 15\, a2\, a3\, a4^5 + 6\, a3^2\, a4^5 + 15\, a1^5\, a2\, a5 + 126\, a1^4\, a2^2\, a5 +$
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$1082\, a1^3\, a2\, a3^2\, a5 + 2043\, a1^2\, a2^2\, a3^2\, a5 + 1082\, a1\, a2^3\, a3^2\, a5 + 126\, a2^4\, a3^2\, a5 +$
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$305\, a1\, a2\, a3^4\, a5 + 126\, a2^2\, a3^4\, a5 + 15\, a1\, a3^5\, a5 + 15\, a2\, a3^5\, a5 + 15\, a1^5\, a4\, a5 +$
$305\, a1^4\, a2\, a4\, a5 + 1082\, a1^3\, a2^2\, a4\, a5 + 1082\, a1^2\, a2^3\, a4\, a5 + 305\, a1\, a2^4\, a4\, a5 + 15\, a2^5\, a4\, a5 +$
$305\, a1^4\, a3\, a4\, a5 + 2552\, a1^3\, a2\, a3\, a4\, a5 + 4782\, a1^2\, a2^2\, a3\, a4\, a5 + 2552\, a1\, a2^3\, a3\, a4\, a5 +$
$305\, a2^4\, a3\, a4\, a5 + 1082\, a1^3\, a3^2\, a4\, a5 + 4782\, a1^2\, a2\, a3^2\, a4\, a5 + 4782\, a1\, a2^2\, a3^2\, a4\, a5 +$
$1082\, a2^3\, a3^2\, a4\, a5 + 1082\, a1^2\, a3^3\, a4\, a5 + 2552\, a1\, a2\, a3^3\, a4\, a5 + 1082\, a2^2\, a3^3\, a4\, a5 +$
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$4782\, a1^2\, a2\, a3\, a4^2\, a5 + 4782\, a1\, a2^2\, a3\, a4^2\, a5 + 1082\, a2^3\, a3\, a4^2\, a5 + 2043\, a1^2\, a3^2\, a4^2\, a5 +$
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$15\, a3\, a4^5\, a5 + 6\, a1^5\, a5^2 + 126\, a1^4\, a2\, a5^2 + 453\, a1^3\, a2^2\, a5^2 + 453\, a1^2\, a2^3\, a5^2 +$
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$1082\, a1\, a2^3\, a3\, a5^2 + 126\, a2^4\, a3\, a5^2 + 453\, a1^3\, a3^2\, a5^2 + 2043\, a1^2\, a2\, a3^2\, a5^2 +$
$2043\, a1\, a2^2\, a3^2\, a5^2 + 453\, a2^3\, a3^2\, a5^2 + 453\, a1^2\, a3^3\, a5^2 + 1082\, a1\, a2\, a3^3\, a5^2 +$
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$2043\, a1^2\, a3^2\, a4\, a5^2 + 4782\, a1\, a2\, a3^2\, a4\, a5^2 + 2043\, a2^2\, a3^2\, a4\, a5^2 + 1082\, a1\, a3^3\, a4\, a5^2 +$
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$15\, a1\, a4\, a5^5 + 15\, a2\, a4\, a5^5 + 15\, a3\, a4\, a5^5 + 6\, a4^2\, a5^5 + 15\, a1^5\, a2\, a6 + 126\, a1^4\, a2^2\, a6 +$
$236\, a1^3\, a2^3\, a6 + 126\, a1^2\, a2^4\, a6 + 15\, a1\, a2^5\, a6 + 15\, a1^5\, a3\, a6 + 305\, a1^4\, a2\, a3\, a6 +$
$1082\, a1^3\, a2^2\, a3\, a6 + 1082\, a1^2\, a2^3\, a3\, a6 + 305\, a1\, a2^4\, a3\, a6 + 15\, a2^5\, a3\, a6 + 126\, a1^4\, a3^2\, a6 +$

$1082\, a1^3\, a2\, a3^2\, a6 + 2043\, a1^2\, a2^2\, a3^2\, a6 + 1082\, a1\, a2^3\, a3^2\, a6 + 126\, a2^4\, a3^2\, a6 +$
$236\, a1^3\, a3^3\, a6 + 1082\, a1^2\, a2\, a3^3\, a6 + 1082\, a1\, a2^2\, a3^3\, a6 + 236\, a2^3\, a3^3\, a6 + 126\, a1^2\, a3^4\, a6 +$
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$15\, a2^5\, a4\, a6 + 305\, a1^4\, a3\, a4\, a6 + 2552\, a1^3\, a2\, a3\, a4\, a6 + 4782\, a1^2\, a2^2\, a3\, a4\, a6 +$
$2552\, a1\, a2^3\, a3\, a4\, a6 + 305\, a2^4\, a3\, a4\, a6 + 1082\, a1^3\, a3^2\, a4\, a6 + 4782\, a1^2\, a2\, a3^2\, a4\, a6 +$
$4782\, a1\, a2^2\, a3^2\, a4\, a6 + 1082\, a2^3\, a3^2\, a4\, a6 + 1082\, a1^2\, a3^3\, a4\, a6 + 2552\, a1\, a2\, a3^3\, a4\, a6 +$
$1082\, a2^2\, a3^3\, a4\, a6 + 305\, a1\, a3^4\, a4\, a6 + 305\, a2\, a3^4\, a4\, a6 + 15\, a3^5\, a4\, a6 + 126\, a1^4\, a4^2\, a6 +$
$1082\, a1^3\, a2\, a4^2\, a6 + 2043\, a1^2\, a2^2\, a4^2\, a6 + 1082\, a1\, a2^3\, a4^2\, a6 + 126\, a2^4\, a4^2\, a6 +$
$1082\, a1^3\, a3\, a4^2\, a6 + 4782\, a1^2\, a2\, a3\, a4^2\, a6 + 4782\, a1\, a2^2\, a3\, a4^2\, a6 + 1082\, a2^3\, a3\, a4^2\, a6 +$
$2043\, a1^2\, a3^2\, a4^2\, a6 + 4782\, a1\, a2\, a3^2\, a4^2\, a6 + 2043\, a2^2\, a3^2\, a4^2\, a6 + 1082\, a1\, a3^3\, a4^2\, a6 +$
$1082\, a2\, a3^3\, a4^2\, a6 + 126\, a3^4\, a4^2\, a6 + 236\, a1^3\, a4^3\, a6 + 1082\, a1^2\, a2\, a4^3\, a6 +$
$1082\, a1\, a2^2\, a4^3\, a6 + 236\, a2^3\, a4^3\, a6 + 1082\, a1^2\, a3\, a4^3\, a6 + 2552\, a1\, a2\, a3\, a4^3\, a6 +$
$1082\, a2^2\, a3\, a4^3\, a6 + 1082\, a1\, a3^2\, a4^3\, a6 + 1082\, a2\, a3^2\, a4^3\, a6 + 236\, a3^3\, a4^3\, a6 +$
$126\, a1^2\, a4^4\, a6 + 305\, a1\, a2\, a4^4\, a6 + 126\, a2^2\, a4^4\, a6 + 305\, a1\, a3\, a4^4\, a6 + 305\, a2\, a3\, a4^4\, a6 +$
$126\, a3^2\, a4^4\, a6 + 15\, a1\, a4^5\, a6 + 15\, a2\, a4^5\, a6 + 15\, a3\, a4^5\, a6 + 15\, a1^5\, a5\, a6 +$
$305\, a1^4\, a2\, a5\, a6 + 1082\, a1^3\, a2^2\, a5\, a6 + 1082\, a1^2\, a2^3\, a5\, a6 + 305\, a1\, a2^4\, a5\, a6 +$
$15\, a2^5\, a5\, a6 + 305\, a1^4\, a3\, a5\, a6 + 2552\, a1^3\, a2\, a3\, a5\, a6 + 4782\, a1^2\, a2^2\, a3\, a5\, a6 +$
$2552\, a1\, a2^3\, a3\, a5\, a6 + 305\, a2^4\, a3\, a5\, a6 + 1082\, a1^3\, a3^2\, a5\, a6 + 4782\, a1^2\, a2\, a3^2\, a5\, a6 +$
$4782\, a1\, a2^2\, a3^2\, a5\, a6 + 1082\, a2^3\, a3^2\, a5\, a6 + 1082\, a1^2\, a3^3\, a5\, a6 + 2552\, a1\, a2\, a3^3\, a5\, a6 +$
$1082\, a2^2\, a3^3\, a5\, a6 + 305\, a1\, a3^4\, a5\, a6 + 305\, a2\, a3^4\, a5\, a6 + 15\, a3^5\, a5\, a6 + 305\, a1^4\, a4\, a5\, a6 +$
$2552\, a1^3\, a2\, a4\, a5\, a6 + 4782\, a1^2\, a2^2\, a4\, a5\, a6 + 2552\, a1\, a2^3\, a4\, a5\, a6 + 305\, a2^4\, a4\, a5\, a6 +$
$2552\, a1^3\, a3\, a4\, a5\, a6 + 11\,040\, a1^2\, a2\, a3\, a4\, a5\, a6 + 11\,040\, a1\, a2^2\, a3\, a4\, a5\, a6 +$
$2552\, a2^3\, a3\, a4\, a5\, a6 + 4782\, a1^2\, a3^2\, a4\, a5\, a6 + 11\,040\, a1\, a2\, a3^2\, a4\, a5\, a6 +$
$4782\, a2^2\, a3^2\, a4\, a5\, a6 + 2552\, a1\, a3^3\, a4\, a5\, a6 + 2552\, a2\, a3^3\, a4\, a5\, a6 + 305\, a3^4\, a4\, a5\, a6 +$
$1082\, a1^3\, a4^2\, a5\, a6 + 4782\, a1^2\, a2\, a4^2\, a5\, a6 + 4782\, a1\, a2^2\, a4^2\, a5\, a6 + 1082\, a2^3\, a4^2\, a5\, a6 +$
$4782\, a1^2\, a3\, a4^2\, a5\, a6 + 11\,040\, a1\, a2\, a3\, a4^2\, a5\, a6 + 4782\, a2^2\, a3\, a4^2\, a5\, a6 +$
$4782\, a1\, a3^2\, a4^2\, a5\, a6 + 4782\, a2\, a3^2\, a4^2\, a5\, a6 + 1082\, a3^3\, a4^2\, a5\, a6 + 1082\, a1^2\, a4^3\, a5\, a6 +$
$2552\, a1\, a2\, a4^3\, a5\, a6 + 1082\, a2^2\, a4^3\, a5\, a6 + 2552\, a1\, a3\, a4^3\, a5\, a6 + 2552\, a2\, a3\, a4^3\, a5\, a6 +$
$1082\, a3^2\, a4^3\, a5\, a6 + 305\, a1\, a4^4\, a5\, a6 + 305\, a2\, a4^4\, a5\, a6 + 305\, a3\, a4^4\, a5\, a6 + 15\, a4^5\, a5\, a6 +$
$126\, a1^4\, a5^2\, a6 + 1082\, a1^3\, a2\, a5^2\, a6 + 2043\, a1^2\, a2^2\, a5^2\, a6 + 1082\, a1\, a2^3\, a5^2\, a6 +$
$126\, a2^4\, a5^2\, a6 + 1082\, a1^3\, a3\, a5^2\, a6 + 4782\, a1^2\, a2\, a3\, a5^2\, a6 + 4782\, a1\, a2^2\, a3\, a5^2\, a6 +$
$1082\, a2^3\, a3\, a5^2\, a6 + 2043\, a1^2\, a3^2\, a5^2\, a6 + 4782\, a1\, a2\, a3^2\, a5^2\, a6 + 2043\, a2^2\, a3^2\, a5^2\, a6 +$
$1082\, a1\, a3^3\, a5^2\, a6 + 1082\, a2\, a3^3\, a5^2\, a6 + 126\, a3^4\, a5^2\, a6 + 1082\, a1^3\, a4\, a5^2\, a6 +$
$4782\, a1^2\, a2\, a4\, a5^2\, a6 + 4782\, a1\, a2^2\, a4\, a5^2\, a6 + 1082\, a2^3\, a4\, a5^2\, a6 + 4782\, a1^2\, a3\, a4\, a5^2\, a6 +$
$11\,040\, a1\, a2\, a3\, a4\, a5^2\, a6 + 4782\, a2^2\, a3\, a4\, a5^2\, a6 + 4782\, a1\, a3^2\, a4\, a5^2\, a6 +$
$4782\, a2\, a3^2\, a4\, a5^2\, a6 + 1082\, a3^3\, a4\, a5^2\, a6 + 2043\, a1^2\, a4^2\, a5^2\, a6 + 4782\, a1\, a2\, a4^2\, a5^2\, a6 +$
$2043\, a2^2\, a4^2\, a5^2\, a6 + 4782\, a1\, a3\, a4^2\, a5^2\, a6 + 4782\, a2\, a3\, a4^2\, a5^2\, a6 + 2043\, a3^2\, a4^2\, a5^2\, a6 +$
$1082\, a1\, a4^3\, a5^2\, a6 + 1082\, a2\, a4^3\, a5^2\, a6 + 1082\, a3\, a4^3\, a5^2\, a6 + 126\, a4^4\, a5^2\, a6 +$
$236\, a1^3\, a5^3\, a6 + 1082\, a1^2\, a2\, a5^3\, a6 + 1082\, a1\, a2^2\, a5^3\, a6 + 236\, a2^3\, a5^3\, a6 +$
$1082\, a1^2\, a3\, a5^3\, a6 + 2552\, a1\, a2\, a3\, a5^3\, a6 + 1082\, a2^2\, a3\, a5^3\, a6 + 1082\, a1\, a3^2\, a5^3\, a6 +$
$1082\, a2\, a3^2\, a5^3\, a6 + 236\, a3^3\, a5^3\, a6 + 1082\, a1^2\, a4\, a5^3\, a6 + 2552\, a1\, a2\, a4\, a5^3\, a6 +$
$1082\, a2^2\, a4\, a5^3\, a6 + 2552\, a1\, a3\, a4\, a5^3\, a6 + 2552\, a2\, a3\, a4\, a5^3\, a6 + 1082\, a3^2\, a4\, a5^3\, a6 +$
$1082\, a1\, a4^2\, a5^3\, a6 + 1082\, a2\, a4^2\, a5^3\, a6 + 1082\, a3\, a4^2\, a5^3\, a6 + 236\, a4^3\, a5^3\, a6 +$
$126\, a1^2\, a5^4\, a6 + 305\, a1\, a2\, a5^4\, a6 + 126\, a2^2\, a5^4\, a6 + 305\, a1\, a3\, a5^4\, a6 + 305\, a2\, a3\, a5^4\, a6 +$
$126\, a3^2\, a5^4\, a6 + 305\, a1\, a4\, a5^4\, a6 + 305\, a2\, a4\, a5^4\, a6 + 305\, a3\, a4\, a5^4\, a6 + 126\, a4^2\, a5^4\, a6 +$
$15\, a1\, a5^5\, a6 + 15\, a2\, a5^5\, a6 + 15\, a3\, a5^5\, a6 + 15\, a4\, a5^5\, a6 + 6\, a1^5\, a6^2 + 126\, a1^4\, a2\, a6^2 +$

$453\, a1^3\, a2^2\, a6^2 + 453\, a1^2\, a2^3\, a6^2 + 126\, a1\, a2^4\, a6^2 + 6\, a2^5\, a6^2 + 126\, a1^4\, a3\, a6^2 +$
$1082\, a1^3\, a2\, a3\, a6^2 + 2043\, a1^2\, a2^2\, a3\, a6^2 + 1082\, a1\, a2^3\, a3\, a6^2 + 126\, a2^4\, a3\, a6^2 +$
$453\, a1^3\, a3^2\, a6^2 + 2043\, a1^2\, a2\, a3^2\, a6^2 + 2043\, a1\, a2^2\, a3^2\, a6^2 + 453\, a2^3\, a3^2\, a6^2 +$
$453\, a1^2\, a3^3\, a6^2 + 1082\, a1\, a2\, a3^3\, a6^2 + 453\, a2^2\, a3^3\, a6^2 + 126\, a1\, a3^4\, a6^2 + 126\, a2\, a3^4\, a6^2 +$
$6\, a3^5\, a6^2 + 126\, a1^4\, a4\, a6^2 + 1082\, a1^3\, a2\, a4\, a6^2 + 2043\, a1^2\, a2^2\, a4\, a6^2 + 1082\, a1\, a2^3\, a4\, a6^2 +$
$126\, a2^4\, a4\, a6^2 + 1082\, a1^3\, a3\, a4\, a6^2 + 4782\, a1^2\, a2\, a3\, a4\, a6^2 + 4782\, a1\, a2^2\, a3\, a4\, a6^2 +$
$1082\, a2^3\, a3\, a4\, a6^2 + 2043\, a1^2\, a3^2\, a4\, a6^2 + 4782\, a1\, a2\, a3^2\, a4\, a6^2 + 2043\, a2^2\, a3^2\, a4\, a6^2 +$
$1082\, a1\, a3^3\, a4\, a6^2 + 1082\, a2\, a3^3\, a4\, a6^2 + 126\, a3^4\, a4\, a6^2 + 453\, a1^3\, a4^2\, a6^2 +$
$2043\, a1^2\, a2\, a4^2\, a6^2 + 2043\, a1\, a2^2\, a4^2\, a6^2 + 453\, a2^3\, a4^2\, a6^2 + 2043\, a1^2\, a3\, a4^2\, a6^2 +$
$4782\, a1\, a2\, a3\, a4^2\, a6^2 + 2043\, a2^2\, a3\, a4^2\, a6^2 + 2043\, a1\, a3^2\, a4^2\, a6^2 + 2043\, a2\, a3^2\, a4^2\, a6^2 +$
$453\, a3^3\, a4^2\, a6^2 + 453\, a1^2\, a4^3\, a6^2 + 1082\, a1\, a2\, a4^3\, a6^2 + 453\, a2^2\, a4^3\, a6^2 + 1082\, a1\, a3\, a4^3\, a6^2 +$
$1082\, a2\, a3\, a4^3\, a6^2 + 453\, a3^2\, a4^3\, a6^2 + 126\, a1\, a4^4\, a6^2 + 126\, a2\, a4^4\, a6^2 + 126\, a3\, a4^4\, a6^2 +$
$6\, a4^5\, a6^2 + 126\, a1^4\, a5\, a6^2 + 1082\, a1^3\, a2\, a5\, a6^2 + 2043\, a1^2\, a2^2\, a5\, a6^2 + 1082\, a1\, a2^3\, a5\, a6^2 +$
$126\, a2^4\, a5\, a6^2 + 1082\, a1^3\, a3\, a5\, a6^2 + 4782\, a1^2\, a2\, a3\, a5\, a6^2 + 4782\, a1\, a2^2\, a3\, a5\, a6^2 +$
$1082\, a2^3\, a3\, a5\, a6^2 + 2043\, a1^2\, a3^2\, a5\, a6^2 + 4782\, a1\, a2\, a3^2\, a5\, a6^2 + 2043\, a2^2\, a3^2\, a5\, a6^2 +$
$1082\, a1\, a3^3\, a5\, a6^2 + 1082\, a2\, a3^3\, a5\, a6^2 + 126\, a3^4\, a5\, a6^2 + 1082\, a1^3\, a4\, a5\, a6^2 +$
$4782\, a1^2\, a2\, a4\, a5\, a6^2 + 4782\, a1\, a2^2\, a4\, a5\, a6^2 + 1082\, a2^3\, a4\, a5\, a6^2 + 4782\, a1^2\, a3\, a4\, a5\, a6^2 +$
$11\,040\, a1\, a2\, a3\, a4\, a5\, a6^2 + 4782\, a2^2\, a3\, a4\, a5\, a6^2 + 4782\, a1\, a3^2\, a4\, a5\, a6^2 +$
$4782\, a2\, a3^2\, a4\, a5\, a6^2 + 1082\, a3^3\, a4\, a5\, a6^2 + 2043\, a1^2\, a4^2\, a5\, a6^2 + 4782\, a1\, a2\, a4^2\, a5\, a6^2 +$
$2043\, a2^2\, a4^2\, a5\, a6^2 + 4782\, a1\, a3\, a4^2\, a5\, a6^2 + 4782\, a2\, a3\, a4^2\, a5\, a6^2 + 2043\, a3^2\, a4^2\, a5\, a6^2 +$
$1082\, a1\, a4^3\, a5\, a6^2 + 1082\, a2\, a4^3\, a5\, a6^2 + 1082\, a3\, a4^3\, a5\, a6^2 + 126\, a4^4\, a5\, a6^2 +$
$453\, a1^3\, a5^2\, a6^2 + 2043\, a1^2\, a2\, a5^2\, a6^2 + 2043\, a1\, a2^2\, a5^2\, a6^2 + 453\, a2^3\, a5^2\, a6^2 +$
$2043\, a1^2\, a3\, a5^2\, a6^2 + 4782\, a1\, a2\, a3\, a5^2\, a6^2 + 2043\, a2^2\, a3\, a5^2\, a6^2 + 2043\, a1\, a3^2\, a5^2\, a6^2 +$
$2043\, a2\, a3^2\, a5^2\, a6^2 + 453\, a3^3\, a5^2\, a6^2 + 2043\, a1^2\, a4\, a5^2\, a6^2 + 4782\, a1\, a2\, a4\, a5^2\, a6^2 +$
$2043\, a2^2\, a4\, a5^2\, a6^2 + 4782\, a1\, a3\, a4\, a5^2\, a6^2 + 4782\, a2\, a3\, a4\, a5^2\, a6^2 + 2043\, a3^2\, a4\, a5^2\, a6^2 +$
$2043\, a1\, a4^2\, a5^2\, a6^2 + 2043\, a2\, a4^2\, a5^2\, a6^2 + 2043\, a3\, a4^2\, a5^2\, a6^2 + 453\, a4^3\, a5^2\, a6^2 +$
$453\, a1^2\, a5^3\, a6^2 + 1082\, a1\, a2\, a5^3\, a6^2 + 453\, a2^2\, a5^3\, a6^2 + 1082\, a1\, a3\, a5^3\, a6^2 +$
$1082\, a2\, a3\, a5^3\, a6^2 + 453\, a3^2\, a5^3\, a6^2 + 1082\, a1\, a4\, a5^3\, a6^2 + 1082\, a2\, a4\, a5^3\, a6^2 +$
$1082\, a3\, a4\, a5^3\, a6^2 + 453\, a4^2\, a5^3\, a6^2 + 126\, a1\, a5^4\, a6^2 + 126\, a2\, a5^4\, a6^2 + 126\, a3\, a5^4\, a6^2 +$
$126\, a4\, a5^4\, a6^2 + 6\, a5^5\, a6^2 + 26\, a1^4\, a6^3 + 236\, a1^3\, a2\, a6^3 + 453\, a1^2\, a2^2\, a6^3 + 236\, a1\, a2^3\, a6^3 +$
$26\, a2^4\, a6^3 + 236\, a1^3\, a3\, a6^3 + 1082\, a1^2\, a2\, a3\, a6^3 + 1082\, a1\, a2^2\, a3\, a6^3 + 236\, a2^3\, a3\, a6^3 +$
$453\, a1^2\, a3^2\, a6^3 + 1082\, a1\, a2\, a3^2\, a6^3 + 453\, a2^2\, a3^2\, a6^3 + 236\, a1\, a3^3\, a6^3 + 236\, a2\, a3^3\, a6^3 +$
$26\, a3^4\, a6^3 + 236\, a1^3\, a4\, a6^3 + 1082\, a1^2\, a2\, a4\, a6^3 + 1082\, a1\, a2^2\, a4\, a6^3 + 236\, a2^3\, a4\, a6^3 +$
$1082\, a1^2\, a3\, a4\, a6^3 + 2552\, a1\, a2\, a3\, a4\, a6^3 + 1082\, a2^2\, a3\, a4\, a6^3 + 1082\, a1\, a3^2\, a4\, a6^3 +$
$1082\, a2\, a3^2\, a4\, a6^3 + 236\, a3^3\, a4\, a6^3 + 453\, a1^2\, a4^2\, a6^3 + 1082\, a1\, a2\, a4^2\, a6^3 + 453\, a2^2\, a4^2\, a6^3 +$
$1082\, a1\, a3\, a4^2\, a6^3 + 1082\, a2\, a3\, a4^2\, a6^3 + 453\, a3^2\, a4^2\, a6^3 + 236\, a1\, a4^3\, a6^3 +$
$236\, a2\, a4^3\, a6^3 + 236\, a3\, a4^3\, a6^3 + 26\, a4^4\, a6^3 + 236\, a1^3\, a5\, a6^3 + 1082\, a1^2\, a2\, a5\, a6^3 +$
$1082\, a1\, a2^2\, a5\, a6^3 + 236\, a2^3\, a5\, a6^3 + 1082\, a1^2\, a3\, a5\, a6^3 + 2552\, a1\, a2\, a3\, a5\, a6^3 +$
$1082\, a2^2\, a3\, a5\, a6^3 + 1082\, a1\, a3^2\, a5\, a6^3 + 1082\, a2\, a3^2\, a5\, a6^3 + 236\, a3^3\, a5\, a6^3 +$
$1082\, a1^2\, a4\, a5\, a6^3 + 2552\, a1\, a2\, a4\, a5\, a6^3 + 1082\, a2^2\, a4\, a5\, a6^3 + 2552\, a1\, a3\, a4\, a5\, a6^3 +$
$2552\, a2\, a3\, a4\, a5\, a6^3 + 1082\, a3^2\, a4\, a5\, a6^3 + 1082\, a1\, a4^2\, a5\, a6^3 + 1082\, a2\, a4^2\, a5\, a6^3 +$
$1082\, a3\, a4^2\, a5\, a6^3 + 236\, a4^3\, a5\, a6^3 + 453\, a1^2\, a5^2\, a6^3 + 1082\, a1\, a2\, a5^2\, a6^3 + 453\, a2^2\, a5^2\, a6^3 +$
$1082\, a1\, a3\, a5^2\, a6^3 + 1082\, a2\, a3\, a5^2\, a6^3 + 453\, a3^2\, a5^2\, a6^3 + 1082\, a1\, a4\, a5^2\, a6^3 +$
$1082\, a2\, a4\, a5^2\, a6^3 + 1082\, a3\, a4\, a5^2\, a6^3 + 453\, a4^2\, a5^2\, a6^3 + 236\, a1\, a5^3\, a6^3 +$
$236\, a2\, a5^3\, a6^3 + 236\, a3\, a5^3\, a6^3 + 236\, a4\, a5^3\, a6^3 + 26\, a5^4\, a6^3 + 26\, a1^3\, a6^4 + 126\, a1^2\, a2\, a6^4 +$
$126\, a1\, a2^2\, a6^4 + 26\, a2^3\, a6^4 + 126\, a1^2\, a3\, a6^4 + 305\, a1\, a2\, a3\, a6^4 + 126\, a2^2\, a3\, a6^4 +$
$126\, a1\, a3^2\, a6^4 + 126\, a2\, a3^2\, a6^4 + 26\, a3^3\, a6^4 + 126\, a1^2\, a4\, a6^4 + 305\, a1\, a2\, a4\, a6^4 +$

$126\, a2^2\, a4\, a6^4 + 305\, a1\, a3\, a4\, a6^4 + 305\, a2\, a3\, a4\, a6^4 + 126\, a3^2\, a4\, a6^4 + 126\, a1\, a4^2\, a6^4 +$
$126\, a2\, a4^2\, a6^4 + 126\, a3\, a4^2\, a6^4 + 26\, a4^3\, a6^4 + 126\, a1^2\, a5\, a6^4 + 305\, a1\, a2\, a5\, a6^4 +$
$126\, a2^2\, a5\, a6^4 + 305\, a1\, a3\, a5\, a6^4 + 305\, a2\, a3\, a5\, a6^4 + 126\, a3^2\, a5\, a6^4 + 305\, a1\, a4\, a5\, a6^4 +$
$305\, a2\, a4\, a5\, a6^4 + 305\, a3\, a4\, a5\, a6^4 + 126\, a4^2\, a5\, a6^4 + 126\, a1\, a5^2\, a6^4 + 126\, a2\, a5^2\, a6^4 +$
$126\, a3\, a5^2\, a6^4 + 126\, a4\, a5^2\, a6^4 + 26\, a5^3\, a6^4 + 6\, a1^2\, a6^5 + 15\, a1\, a2\, a6^5 + 6\, a2^2\, a6^5 +$
$15\, a1\, a3\, a6^5 + 15\, a2\, a3\, a6^5 + 6\, a3^2\, a6^5 + 15\, a1\, a4\, a6^5 + 15\, a2\, a4\, a6^5 + 15\, a3\, a4\, a6^5 +$
$6\, a4^2\, a6^5 + 15\, a1\, a5\, a6^5 + 15\, a2\, a5\, a6^5 + 15\, a3\, a5\, a6^5 + 15\, a4\, a5\, a6^5 + 6\, a5^2\, a6^5$

In[44]:=
```
G6 = SeriesCoefficient[%41, {t, 0, 6}]
```

Out[44]=

$4\, a1^5\, a2 + 34\, a1^4\, a2^2 + 64\, a1^3\, a2^3 + 34\, a1^2\, a2^4 + 4\, a1\, a2^5 + 4\, a1^5\, a3 + 83\, a1^4\, a2\, a3 +$
$298\, a1^3\, a2^2\, a3 + 298\, a1^2\, a2^3\, a3 + 83\, a1\, a2^4\, a3 + 4\, a2^5\, a3 + 34\, a1^4\, a3^2 + 298\, a1^3\, a2\, a3^2 +$
$567\, a1^2\, a2^2\, a3^2 + 298\, a1\, a2^3\, a3^2 + 34\, a2^4\, a3^2 + 64\, a1^3\, a3^3 + 298\, a1^2\, a2\, a3^3 +$
$298\, a1\, a2^2\, a3^3 + 64\, a2^3\, a3^3 + 34\, a1^2\, a3^4 + 83\, a1\, a2\, a3^4 + 34\, a2^2\, a3^4 + 4\, a1\, a3^5 +$
$4\, a2\, a3^5 + 4\, a1^5\, a4 + 83\, a1^4\, a2\, a4 + 298\, a1^3\, a2^2\, a4 + 298\, a1^2\, a2^3\, a4 + 83\, a1\, a2^4\, a4 +$
$4\, a2^5\, a4 + 83\, a1^4\, a3\, a4 + 712\, a1^3\, a2\, a3\, a4 + 1346\, a1^2\, a2^2\, a3\, a4 + 712\, a1\, a2^3\, a3\, a4 +$
$83\, a2^4\, a3\, a4 + 298\, a1^3\, a3^2\, a4 + 1346\, a1^2\, a2\, a3^2\, a4 + 1346\, a1\, a2^2\, a3^2\, a4 + 298\, a2^3\, a3^2\, a4 +$
$298\, a1^2\, a3^3\, a4 + 712\, a1\, a2\, a3^3\, a4 + 298\, a2^2\, a3^3\, a4 + 83\, a1\, a3^4\, a4 + 83\, a2\, a3^4\, a4 +$
$4\, a3^5\, a4 + 34\, a1^4\, a4^2 + 298\, a1^3\, a2\, a4^2 + 567\, a1^2\, a2^2\, a4^2 + 298\, a1\, a2^3\, a4^2 + 34\, a2^4\, a4^2 +$
$298\, a1^3\, a3\, a4^2 + 1346\, a1^2\, a2\, a3\, a4^2 + 1346\, a1\, a2^2\, a3\, a4^2 + 298\, a2^3\, a3\, a4^2 + 567\, a1^2\, a3^2\, a4^2 +$
$1346\, a1\, a2\, a3^2\, a4^2 + 567\, a2^2\, a3^2\, a4^2 + 298\, a1\, a3^3\, a4^2 + 298\, a2\, a3^3\, a4^2 + 34\, a3^4\, a4^2 +$
$64\, a1^3\, a4^3 + 298\, a1^2\, a2\, a4^3 + 298\, a1\, a2^2\, a4^3 + 64\, a2^3\, a4^3 + 298\, a1^2\, a3\, a4^3 + 712\, a1\, a2\, a3\, a4^3 +$
$298\, a2^2\, a3\, a4^3 + 298\, a1\, a3^2\, a4^3 + 298\, a2\, a3^2\, a4^3 + 64\, a3^3\, a4^3 + 34\, a1^2\, a4^4 + 83\, a1\, a2\, a4^4 +$
$34\, a2^2\, a4^4 + 83\, a1\, a3\, a4^4 + 83\, a2\, a3\, a4^4 + 34\, a3^2\, a4^4 + 4\, a1\, a4^5 + 4\, a2\, a4^5 + 4\, a3\, a4^5 +$
$4\, a1^5\, a5 + 83\, a1^4\, a2\, a5 + 298\, a1^3\, a2^2\, a5 + 298\, a1^2\, a2^3\, a5 + 83\, a1\, a2^4\, a5 + 4\, a2^5\, a5 +$
$83\, a1^4\, a3\, a5 + 712\, a1^3\, a2\, a3\, a5 + 1346\, a1^2\, a2^2\, a3\, a5 + 712\, a1\, a2^3\, a3\, a5 + 83\, a2^4\, a3\, a5 +$
$298\, a1^3\, a3^2\, a5 + 1346\, a1^2\, a2\, a3^2\, a5 + 1346\, a1\, a2^2\, a3^2\, a5 + 298\, a2^3\, a3^2\, a5 + 298\, a1^2\, a3^3\, a5 +$
$712\, a1\, a2\, a3^3\, a5 + 298\, a2^2\, a3^3\, a5 + 83\, a1\, a3^4\, a5 + 83\, a2\, a3^4\, a5 + 4\, a3^5\, a5 + 83\, a1^4\, a4\, a5 +$
$712\, a1^3\, a2\, a4\, a5 + 1346\, a1^2\, a2^2\, a4\, a5 + 712\, a1\, a2^3\, a4\, a5 + 83\, a2^4\, a4\, a5 + 712\, a1^3\, a3\, a4\, a5 +$
$3164\, a1^2\, a2\, a3\, a4\, a5 + 3164\, a1\, a2^2\, a3\, a4\, a5 + 712\, a2^3\, a3\, a4\, a5 + 1346\, a1^2\, a3^2\, a4\, a5 +$
$3164\, a1\, a2\, a3^2\, a4\, a5 + 1346\, a2^2\, a3^2\, a4\, a5 + 712\, a1\, a3^3\, a4\, a5 + 712\, a2\, a3^3\, a4\, a5 +$
$83\, a3^4\, a4\, a5 + 298\, a1^3\, a4^2\, a5 + 1346\, a1^2\, a2\, a4^2\, a5 + 1346\, a1\, a2^2\, a4^2\, a5 + 298\, a2^3\, a4^2\, a5 +$
$1346\, a1^2\, a3\, a4^2\, a5 + 3164\, a1\, a2\, a3\, a4^2\, a5 + 1346\, a2^2\, a3\, a4^2\, a5 + 1346\, a1\, a3^2\, a4^2\, a5 +$
$1346\, a2\, a3^2\, a4^2\, a5 + 298\, a3^3\, a4^2\, a5 + 298\, a1^2\, a4^3\, a5 + 712\, a1\, a2\, a4^3\, a5 + 298\, a2^2\, a4^3\, a5 +$
$712\, a1\, a3\, a4^3\, a5 + 712\, a2\, a3\, a4^3\, a5 + 298\, a3^2\, a4^3\, a5 + 83\, a1\, a4^4\, a5 + 83\, a2\, a4^4\, a5 +$
$83\, a3\, a4^4\, a5 + 4\, a4^5\, a5 + 34\, a1^4\, a5^2 + 298\, a1^3\, a2\, a5^2 + 567\, a1^2\, a2^2\, a5^2 + 298\, a1\, a2^3\, a5^2 +$
$34\, a2^4\, a5^2 + 298\, a1^3\, a3\, a5^2 + 1346\, a1^2\, a2\, a3\, a5^2 + 1346\, a1\, a2^2\, a3\, a5^2 + 298\, a2^3\, a3\, a5^2 +$
$567\, a1^2\, a3^2\, a5^2 + 1346\, a1\, a2\, a3^2\, a5^2 + 567\, a2^2\, a3^2\, a5^2 + 298\, a1\, a3^3\, a5^2 + 298\, a2\, a3^3\, a5^2 +$
$34\, a3^4\, a5^2 + 298\, a1^3\, a4\, a5^2 + 1346\, a1^2\, a2\, a4\, a5^2 + 1346\, a1\, a2^2\, a4\, a5^2 + 298\, a2^3\, a4\, a5^2 +$
$1346\, a1^2\, a3\, a4\, a5^2 + 3164\, a1\, a2\, a3\, a4\, a5^2 + 1346\, a2^2\, a3\, a4\, a5^2 + 1346\, a1\, a3^2\, a4\, a5^2 +$
$1346\, a2\, a3^2\, a4\, a5^2 + 298\, a3^3\, a4\, a5^2 + 567\, a1^2\, a4^2\, a5^2 + 1346\, a1\, a2\, a4^2\, a5^2 + 567\, a2^2\, a4^2\, a5^2 +$
$1346\, a1\, a3\, a4^2\, a5^2 + 1346\, a2\, a3\, a4^2\, a5^2 + 567\, a3^2\, a4^2\, a5^2 + 298\, a1\, a4^3\, a5^2 + 298\, a2\, a4^3\, a5^2 +$
$298\, a3\, a4^3\, a5^2 + 34\, a4^4\, a5^2 + 64\, a1^3\, a5^3 + 298\, a1^2\, a2\, a5^3 + 298\, a1\, a2^2\, a5^3 + 64\, a2^3\, a5^3 +$
$298\, a1^2\, a3\, a5^3 + 712\, a1\, a2\, a3\, a5^3 + 298\, a2^2\, a3\, a5^3 + 298\, a1\, a3^2\, a5^3 + 298\, a2\, a3^2\, a5^3 +$
$64\, a3^3\, a5^3 + 298\, a1^2\, a4\, a5^3 + 712\, a1\, a2\, a4\, a5^3 + 298\, a2^2\, a4\, a5^3 + 712\, a1\, a3\, a4\, a5^3 +$
$712\, a2\, a3\, a4\, a5^3 + 298\, a3^2\, a4\, a5^3 + 298\, a1\, a4^2\, a5^3 + 298\, a2\, a4^2\, a5^3 + 298\, a3\, a4^2\, a5^3 +$
$64\, a4^3\, a5^3 + 34\, a1^2\, a5^4 + 83\, a1\, a2\, a5^4 + 34\, a2^2\, a5^4 + 83\, a1\, a3\, a5^4 + 83\, a2\, a3\, a5^4 + 34\, a3^2\, a5^4 +$
$83\, a1\, a4\, a5^4 + 83\, a2\, a4\, a5^4 + 83\, a3\, a4\, a5^4 + 34\, a4^2\, a5^4 + 4\, a1\, a5^5 + 4\, a2\, a5^5 + 4\, a3\, a5^5 +$

$4\,a4\,a5^5 + 4\,a1^5\,a6 + 83\,a1^4\,a2\,a6 + 298\,a1^3\,a2^2\,a6 + 298\,a1^2\,a2^3\,a6 + 83\,a1\,a2^4\,a6 + 4\,a2^5\,a6 +$
$83\,a1^4\,a3\,a6 + 712\,a1^3\,a2\,a3\,a6 + 1346\,a1^2\,a2^2\,a3\,a6 + 712\,a1\,a2^3\,a3\,a6 + 83\,a2^4\,a3\,a6 +$
$298\,a1^3\,a3^2\,a6 + 1346\,a1^2\,a2\,a3^2\,a6 + 1346\,a1\,a2^2\,a3^2\,a6 + 298\,a2^3\,a3^2\,a6 + 298\,a1^2\,a3^3\,a6 +$
$712\,a1\,a2\,a3^3\,a6 + 298\,a2^2\,a3^3\,a6 + 83\,a1\,a3^4\,a6 + 83\,a2\,a3^4\,a6 + 4\,a3^5\,a6 + 83\,a1^4\,a4\,a6 +$
$712\,a1^3\,a2\,a4\,a6 + 1346\,a1^2\,a2^2\,a4\,a6 + 712\,a1\,a2^3\,a4\,a6 + 83\,a2^4\,a4\,a6 + 712\,a1^3\,a3\,a4\,a6 +$
$3164\,a1^2\,a2\,a3\,a4\,a6 + 3164\,a1\,a2^2\,a3\,a4\,a6 + 712\,a2^3\,a3\,a4\,a6 + 1346\,a1^2\,a3^2\,a4\,a6 +$
$3164\,a1\,a2\,a3^2\,a4\,a6 + 1346\,a2^2\,a3^2\,a4\,a6 + 712\,a1\,a3^3\,a4\,a6 + 712\,a2\,a3^3\,a4\,a6 +$
$83\,a3^4\,a4\,a6 + 298\,a1^3\,a4^2\,a6 + 1346\,a1^2\,a2\,a4^2\,a6 + 1346\,a1\,a2^2\,a4^2\,a6 + 298\,a2^3\,a4^2\,a6 +$
$1346\,a1^2\,a3\,a4^2\,a6 + 3164\,a1\,a2\,a3\,a4^2\,a6 + 1346\,a2^2\,a3\,a4^2\,a6 + 1346\,a1\,a3^2\,a4^2\,a6 +$
$1346\,a2\,a3^2\,a4^2\,a6 + 298\,a3^3\,a4^2\,a6 + 298\,a1^2\,a4^3\,a6 + 712\,a1\,a2\,a4^3\,a6 + 298\,a2^2\,a4^3\,a6 +$
$712\,a1\,a3\,a4^3\,a6 + 712\,a2\,a3\,a4^3\,a6 + 298\,a3^2\,a4^3\,a6 + 83\,a1\,a4^4\,a6 + 83\,a2\,a4^4\,a6 +$
$83\,a3\,a4^4\,a6 + 4\,a4^5\,a6 + 83\,a1^4\,a5\,a6 + 712\,a1^3\,a2\,a5\,a6 + 1346\,a1^2\,a2^2\,a5\,a6 +$
$712\,a1\,a2^3\,a5\,a6 + 83\,a2^4\,a5\,a6 + 712\,a1^3\,a3\,a5\,a6 + 3164\,a1^2\,a2\,a3\,a5\,a6 +$
$3164\,a1\,a2^2\,a3\,a5\,a6 + 712\,a2^3\,a3\,a5\,a6 + 1346\,a1^2\,a3^2\,a5\,a6 + 3164\,a1\,a2\,a3^2\,a5\,a6 +$
$1346\,a2^2\,a3^2\,a5\,a6 + 712\,a1\,a3^3\,a5\,a6 + 712\,a2\,a3^3\,a5\,a6 + 83\,a3^4\,a5\,a6 + 712\,a1^3\,a4\,a5\,a6 +$
$3164\,a1^2\,a2\,a4\,a5\,a6 + 3164\,a1\,a2^2\,a4\,a5\,a6 + 712\,a2^3\,a4\,a5\,a6 + 3164\,a1^2\,a3\,a4\,a5\,a6 +$
$7360\,a1\,a2\,a3\,a4\,a5\,a6 + 3164\,a2^2\,a3\,a4\,a5\,a6 + 3164\,a1\,a3^2\,a4\,a5\,a6 + 3164\,a2\,a3^2\,a4\,a5\,a6 +$
$712\,a3^3\,a4\,a5\,a6 + 1346\,a1^2\,a4^2\,a5\,a6 + 3164\,a1\,a2\,a4^2\,a5\,a6 + 1346\,a2^2\,a4^2\,a5\,a6 +$
$3164\,a1\,a3\,a4^2\,a5\,a6 + 3164\,a2\,a3\,a4^2\,a5\,a6 + 1346\,a3^2\,a4^2\,a5\,a6 + 712\,a1\,a4^3\,a5\,a6 +$
$712\,a2\,a4^3\,a5\,a6 + 712\,a3\,a4^3\,a5\,a6 + 83\,a4^4\,a5\,a6 + 298\,a1^3\,a5^2\,a6 + 1346\,a1^2\,a2\,a5^2\,a6 +$
$1346\,a1\,a2^2\,a5^2\,a6 + 298\,a2^3\,a5^2\,a6 + 1346\,a1^2\,a3\,a5^2\,a6 + 3164\,a1\,a2\,a3\,a5^2\,a6 +$
$1346\,a2^2\,a3\,a5^2\,a6 + 1346\,a1\,a3^2\,a5^2\,a6 + 1346\,a2\,a3^2\,a5^2\,a6 + 298\,a3^3\,a5^2\,a6 +$
$1346\,a1^2\,a4\,a5^2\,a6 + 3164\,a1\,a2\,a4\,a5^2\,a6 + 1346\,a2^2\,a4\,a5^2\,a6 + 3164\,a1\,a3\,a4\,a5^2\,a6 +$
$3164\,a2\,a3\,a4\,a5^2\,a6 + 1346\,a3^2\,a4\,a5^2\,a6 + 1346\,a1\,a4^2\,a5^2\,a6 + 1346\,a2\,a4^2\,a5^2\,a6 +$
$1346\,a3\,a4^2\,a5^2\,a6 + 298\,a4^3\,a5^2\,a6 + 298\,a1^2\,a5^3\,a6 + 712\,a1\,a2\,a5^3\,a6 + 298\,a2^2\,a5^3\,a6 +$
$712\,a1\,a3\,a5^3\,a6 + 712\,a2\,a3\,a5^3\,a6 + 298\,a3^2\,a5^3\,a6 + 712\,a1\,a4\,a5^3\,a6 + 712\,a2\,a4\,a5^3\,a6 +$
$712\,a3\,a4\,a5^3\,a6 + 298\,a4^2\,a5^3\,a6 + 83\,a1\,a5^4\,a6 + 83\,a2\,a5^4\,a6 + 83\,a3\,a5^4\,a6 +$
$83\,a4\,a5^4\,a6 + 4\,a5^5\,a6 + 34\,a1^4\,a6^2 + 298\,a1^3\,a2\,a6^2 + 567\,a1^2\,a2^2\,a6^2 + 298\,a1\,a2^3\,a6^2 +$
$34\,a2^4\,a6^2 + 298\,a1^3\,a3\,a6^2 + 1346\,a1^2\,a2\,a3\,a6^2 + 1346\,a1\,a2^2\,a3\,a6^2 + 298\,a2^3\,a3\,a6^2 +$
$567\,a1^2\,a3^2\,a6^2 + 1346\,a1\,a2\,a3^2\,a6^2 + 567\,a2^2\,a3^2\,a6^2 + 298\,a1\,a3^3\,a6^2 + 298\,a2\,a3^3\,a6^2 +$
$34\,a3^4\,a6^2 + 298\,a1^3\,a4\,a6^2 + 1346\,a1^2\,a2\,a4\,a6^2 + 1346\,a1\,a2^2\,a4\,a6^2 + 298\,a2^3\,a4\,a6^2 +$
$1346\,a1^2\,a3\,a4\,a6^2 + 3164\,a1\,a2\,a3\,a4\,a6^2 + 1346\,a2^2\,a3\,a4\,a6^2 + 1346\,a1\,a3^2\,a4\,a6^2 +$
$1346\,a2\,a3^2\,a4\,a6^2 + 298\,a3^3\,a4\,a6^2 + 567\,a1^2\,a4^2\,a6^2 + 1346\,a1\,a2\,a4^2\,a6^2 + 567\,a2^2\,a4^2\,a6^2 +$
$1346\,a1\,a3\,a4^2\,a6^2 + 1346\,a2\,a3\,a4^2\,a6^2 + 567\,a3^2\,a4^2\,a6^2 + 298\,a1\,a4^3\,a6^2 + 298\,a2\,a4^3\,a6^2 +$
$298\,a3\,a4^3\,a6^2 + 34\,a4^4\,a6^2 + 298\,a1^3\,a5\,a6^2 + 1346\,a1^2\,a2\,a5\,a6^2 + 1346\,a1\,a2^2\,a5\,a6^2 +$
$298\,a2^3\,a5\,a6^2 + 1346\,a1^2\,a3\,a5\,a6^2 + 3164\,a1\,a2\,a3\,a5\,a6^2 + 1346\,a2^2\,a3\,a5\,a6^2 +$
$1346\,a1\,a3^2\,a5\,a6^2 + 1346\,a2\,a3^2\,a5\,a6^2 + 298\,a3^3\,a5\,a6^2 + 1346\,a1^2\,a4\,a5\,a6^2 +$
$3164\,a1\,a2\,a4\,a5\,a6^2 + 1346\,a2^2\,a4\,a5\,a6^2 + 3164\,a1\,a3\,a4\,a5\,a6^2 + 3164\,a2\,a3\,a4\,a5\,a6^2 +$
$1346\,a3^2\,a4\,a5\,a6^2 + 1346\,a1\,a4^2\,a5\,a6^2 + 1346\,a2\,a4^2\,a5\,a6^2 + 1346\,a3\,a4^2\,a5\,a6^2 +$
$298\,a4^3\,a5\,a6^2 + 567\,a1^2\,a5^2\,a6^2 + 1346\,a1\,a2\,a5^2\,a6^2 + 567\,a2^2\,a5^2\,a6^2 + 1346\,a1\,a3\,a5^2\,a6^2 +$
$1346\,a2\,a3\,a5^2\,a6^2 + 567\,a3^2\,a5^2\,a6^2 + 1346\,a1\,a4\,a5^2\,a6^2 + 1346\,a2\,a4\,a5^2\,a6^2 +$
$1346\,a3\,a4\,a5^2\,a6^2 + 567\,a4^2\,a5^2\,a6^2 + 298\,a1\,a5^3\,a6^2 + 298\,a2\,a5^3\,a6^2 + 298\,a3\,a5^3\,a6^2 +$
$298\,a4\,a5^3\,a6^2 + 34\,a5^4\,a6^2 + 64\,a1^3\,a6^3 + 298\,a1^2\,a2\,a6^3 + 298\,a1\,a2^2\,a6^3 + 64\,a2^3\,a6^3 +$
$298\,a1^2\,a3\,a6^3 + 712\,a1\,a2\,a3\,a6^3 + 298\,a2^2\,a3\,a6^3 + 298\,a1\,a3^2\,a6^3 + 298\,a2\,a3^2\,a6^3 +$
$64\,a3^3\,a6^3 + 298\,a1^2\,a4\,a6^3 + 712\,a1\,a2\,a4\,a6^3 + 298\,a2^2\,a4\,a6^3 + 712\,a1\,a3\,a4\,a6^3 +$
$712\,a2\,a3\,a4\,a6^3 + 298\,a3^2\,a4\,a6^3 + 298\,a1\,a4^2\,a6^3 + 298\,a2\,a4^2\,a6^3 + 298\,a3\,a4^2\,a6^3 +$
$64\,a4^3\,a6^3 + 298\,a1^2\,a5\,a6^3 + 712\,a1\,a2\,a5\,a6^3 + 298\,a2^2\,a5\,a6^3 + 712\,a1\,a3\,a5\,a6^3 +$

$$712\ a2\ a3\ a5\ a6^3 + 298\ a3^2\ a5\ a6^3 + 712\ a1\ a4\ a5\ a6^3 + 712\ a2\ a4\ a5\ a6^3 + 712\ a3\ a4\ a5\ a6^3 + 298\ a4^2\ a5\ a6^3 + 298\ a1\ a5^2\ a6^3 + 298\ a2\ a5^2\ a6^3 + 298\ a3\ a5^2\ a6^3 + 298\ a4\ a5^2\ a6^3 + 64\ a5^3\ a6^3 + 34\ a1^2\ a6^4 + 83\ a1\ a2\ a6^4 + 34\ a2^2\ a6^4 + 83\ a1\ a3\ a6^4 + 83\ a2\ a3\ a6^4 + 34\ a3^2\ a6^4 + 83\ a1\ a4\ a6^4 + 83\ a2\ a4\ a6^4 + 83\ a3\ a4\ a6^4 + 34\ a4^2\ a6^4 + 83\ a1\ a5\ a6^4 + 83\ a2\ a5\ a6^4 + 83\ a3\ a5\ a6^4 + 83\ a4\ a5\ a6^4 + 34\ a5^2\ a6^4 + 4\ a1\ a6^5 + 4\ a2\ a6^5 + 4\ a3\ a6^5 + 4\ a4\ a6^5 + 4\ a5\ a6^5$$

In[45]:=
```
G5 = SeriesCoefficient[%41, {t, 0, 5}]
```

Out[45]=

$$
\begin{aligned}
& a1^5 + 21\, a1^4\, a2 + 76\, a1^3\, a2^2 + 76\, a1^2\, a2^3 + 21\, a1\, a2^4 + a2^5 + 21\, a1^4\, a3 + 183\, a1^3\, a2\, a3 + \\
& 348\, a1^2\, a2^2\, a3 + 183\, a1\, a2^3\, a3 + 21\, a2^4\, a3 + 76\, a1^3\, a3^2 + 348\, a1^2\, a2\, a3^2 + 348\, a1\, a2^2\, a3^2 + \\
& 76\, a2^3\, a3^2 + 76\, a1^2\, a3^3 + 183\, a1\, a2\, a3^3 + 76\, a2^2\, a3^3 + 21\, a1\, a3^4 + 21\, a2\, a3^4 + a3^5 + \\
& 21\, a1^4\, a4 + 183\, a1^3\, a2\, a4 + 348\, a1^2\, a2^2\, a4 + 183\, a1\, a2^3\, a4 + 21\, a2^4\, a4 + 183\, a1^3\, a3\, a4 + \\
& 827\, a1^2\, a2\, a3\, a4 + 827\, a1\, a2^2\, a3\, a4 + 183\, a2^3\, a3\, a4 + 348\, a1^2\, a3^2\, a4 + 827\, a1\, a2\, a3^2\, a4 + \\
& 348\, a2^2\, a3^2\, a4 + 183\, a1\, a3^3\, a4 + 183\, a2\, a3^3\, a4 + 21\, a3^4\, a4 + 76\, a1^3\, a4^2 + 348\, a1^2\, a2\, a4^2 + \\
& 348\, a1\, a2^2\, a4^2 + 76\, a2^3\, a4^2 + 348\, a1^2\, a3\, a4^2 + 827\, a1\, a2\, a3\, a4^2 + 348\, a2^2\, a3\, a4^2 + \\
& 348\, a1\, a3^2\, a4^2 + 348\, a2\, a3^2\, a4^2 + 76\, a3^3\, a4^2 + 76\, a1^2\, a4^3 + 183\, a1\, a2\, a4^3 + 76\, a2^2\, a4^3 + \\
& 183\, a1\, a3\, a4^3 + 183\, a2\, a3\, a4^3 + 76\, a3^2\, a4^3 + 21\, a1\, a4^4 + 21\, a2\, a4^4 + 21\, a3\, a4^4 + \\
& a4^5 + 21\, a1^4\, a5 + 183\, a1^3\, a2\, a5 + 348\, a1^2\, a2^2\, a5 + 183\, a1\, a2^3\, a5 + 21\, a2^4\, a5 + \\
& 183\, a1^3\, a3\, a5 + 827\, a1^2\, a2\, a3\, a5 + 827\, a1\, a2^2\, a3\, a5 + 183\, a2^3\, a3\, a5 + 348\, a1^2\, a3^2\, a5 + \\
& 827\, a1\, a2\, a3^2\, a5 + 348\, a2^2\, a3^2\, a5 + 183\, a1\, a3^3\, a5 + 183\, a2\, a3^3\, a5 + 21\, a3^4\, a5 + \\
& 183\, a1^3\, a4\, a5 + 827\, a1^2\, a2\, a4\, a5 + 827\, a1\, a2^2\, a4\, a5 + 183\, a2^3\, a4\, a5 + 827\, a1^2\, a3\, a4\, a5 + \\
& 1950\, a1\, a2\, a3\, a4\, a5 + 827\, a2^2\, a3\, a4\, a5 + 827\, a1\, a3^2\, a4\, a5 + 827\, a2\, a3^2\, a4\, a5 + \\
& 183\, a3^3\, a4\, a5 + 348\, a1^2\, a4^2\, a5 + 827\, a1\, a2\, a4^2\, a5 + 348\, a2^2\, a4^2\, a5 + 827\, a1\, a3\, a4^2\, a5 + \\
& 827\, a2\, a3\, a4^2\, a5 + 348\, a3^2\, a4^2\, a5 + 183\, a1\, a4^3\, a5 + 183\, a2\, a4^3\, a5 + 183\, a3\, a4^3\, a5 + \\
& 21\, a4^4\, a5 + 76\, a1^3\, a5^2 + 348\, a1^2\, a2\, a5^2 + 348\, a1\, a2^2\, a5^2 + 76\, a2^3\, a5^2 + 348\, a1^2\, a3\, a5^2 + \\
& 827\, a1\, a2\, a3\, a5^2 + 348\, a2^2\, a3\, a5^2 + 348\, a1\, a3^2\, a5^2 + 348\, a2\, a3^2\, a5^2 + 76\, a3^3\, a5^2 + \\
& 348\, a1^2\, a4\, a5^2 + 827\, a1\, a2\, a4\, a5^2 + 348\, a2^2\, a4\, a5^2 + 827\, a1\, a3\, a4\, a5^2 + 827\, a2\, a3\, a4\, a5^2 + \\
& 348\, a3^2\, a4\, a5^2 + 348\, a1\, a4^2\, a5^2 + 348\, a2\, a4^2\, a5^2 + 348\, a3\, a4^2\, a5^2 + 76\, a4^3\, a5^2 + 76\, a1^2\, a5^3 + \\
& 183\, a1\, a2\, a5^3 + 76\, a2^2\, a5^3 + 183\, a1\, a3\, a5^3 + 183\, a2\, a3\, a5^3 + 76\, a3^2\, a5^3 + 183\, a1\, a4\, a5^3 + \\
& 183\, a2\, a4\, a5^3 + 183\, a3\, a4\, a5^3 + 76\, a4^2\, a5^3 + 21\, a1\, a5^4 + 21\, a2\, a5^4 + 21\, a3\, a5^4 + \\
& 21\, a4\, a5^4 + a5^5 + 21\, a1^4\, a6 + 183\, a1^3\, a2\, a6 + 348\, a1^2\, a2^2\, a6 + 183\, a1\, a2^3\, a6 + 21\, a2^4\, a6 + \\
& 183\, a1^3\, a3\, a6 + 827\, a1^2\, a2\, a3\, a6 + 827\, a1\, a2^2\, a3\, a6 + 183\, a2^3\, a3\, a6 + 348\, a1^2\, a3^2\, a6 + \\
& 827\, a1\, a2\, a3^2\, a6 + 348\, a2^2\, a3^2\, a6 + 183\, a1\, a3^3\, a6 + 183\, a2\, a3^3\, a6 + 21\, a3^4\, a6 + \\
& 183\, a1^3\, a4\, a6 + 827\, a1^2\, a2\, a4\, a6 + 827\, a1\, a2^2\, a4\, a6 + 183\, a2^3\, a4\, a6 + 827\, a1^2\, a3\, a4\, a6 + \\
& 1950\, a1\, a2\, a3\, a4\, a6 + 827\, a2^2\, a3\, a4\, a6 + 827\, a1\, a3^2\, a4\, a6 + 827\, a2\, a3^2\, a4\, a6 + 183\, a3^3\, a4\, a6 + \\
& 348\, a1^2\, a4^2\, a6 + 827\, a1\, a2\, a4^2\, a6 + 348\, a2^2\, a4^2\, a6 + 827\, a1\, a3\, a4^2\, a6 + 827\, a2\, a3\, a4^2\, a6 + \\
& 348\, a3^2\, a4^2\, a6 + 183\, a1\, a4^3\, a6 + 183\, a2\, a4^3\, a6 + 183\, a3\, a4^3\, a6 + 21\, a4^4\, a6 + 183\, a1^3\, a5\, a6 + \\
& 827\, a1^2\, a2\, a5\, a6 + 827\, a1\, a2^2\, a5\, a6 + 183\, a2^3\, a5\, a6 + 827\, a1^2\, a3\, a5\, a6 + 1950\, a1\, a2\, a3\, a5\, a6 + \\
& 827\, a2^2\, a3\, a5\, a6 + 827\, a1\, a3^2\, a5\, a6 + 827\, a2\, a3^2\, a5\, a6 + 183\, a3^3\, a5\, a6 + 827\, a1^2\, a4\, a5\, a6 + \\
& 1950\, a1\, a2\, a4\, a5\, a6 + 827\, a2^2\, a4\, a5\, a6 + 1950\, a1\, a3\, a4\, a5\, a6 + 1950\, a2\, a3\, a4\, a5\, a6 + \\
& 827\, a3^2\, a4\, a5\, a6 + 827\, a1\, a4^2\, a5\, a6 + 827\, a2\, a4^2\, a5\, a6 + 827\, a3\, a4^2\, a5\, a6 + 183\, a4^3\, a5\, a6 + \\
& 348\, a1^2\, a5^2\, a6 + 827\, a1\, a2\, a5^2\, a6 + 348\, a2^2\, a5^2\, a6 + 827\, a1\, a3\, a5^2\, a6 + 827\, a2\, a3\, a5^2\, a6 + \\
& 348\, a3^2\, a5^2\, a6 + 827\, a1\, a4\, a5^2\, a6 + 827\, a2\, a4\, a5^2\, a6 + 827\, a3\, a4\, a5^2\, a6 + 348\, a4^2\, a5^2\, a6 + \\
& 183\, a1\, a5^3\, a6 + 183\, a2\, a5^3\, a6 + 183\, a3\, a5^3\, a6 + 183\, a4\, a5^3\, a6 + 21\, a5^4\, a6 + 76\, a1^3\, a6^2 + \\
& 348\, a1^2\, a2\, a6^2 + 348\, a1\, a2^2\, a6^2 + 76\, a2^3\, a6^2 + 348\, a1^2\, a3\, a6^2 + 827\, a1\, a2\, a3\, a6^2 + \\
& 348\, a2^2\, a3\, a6^2 + 348\, a1\, a3^2\, a6^2 + 348\, a2\, a3^2\, a6^2 + 76\, a3^3\, a6^2 + 348\, a1^2\, a4\, a6^2 + \\
& 827\, a1\, a2\, a4\, a6^2 + 348\, a2^2\, a4\, a6^2 + 827\, a1\, a3\, a4\, a6^2 + 827\, a2\, a3\, a4\, a6^2 + 348\, a3^2\, a4\, a6^2 + \\
& 348\, a1\, a4^2\, a6^2 + 348\, a2\, a4^2\, a6^2 + 348\, a3\, a4^2\, a6^2 + 76\, a4^3\, a6^2 + 348\, a1^2\, a5\, a6^2 + \\
& 827\, a1\, a2\, a5\, a6^2 + 348\, a2^2\, a5\, a6^2 + 827\, a1\, a3\, a5\, a6^2 + 827\, a2\, a3\, a5\, a6^2 + 348\, a3^2\, a5\, a6^2 + \\
& 827\, a1\, a4\, a5\, a6^2 + 827\, a2\, a4\, a5\, a6^2 + 827\, a3\, a4\, a5\, a6^2 + 348\, a4^2\, a5\, a6^2 + 348\, a1\, a5^2\, a6^2 + \\
& 348\, a2\, a5^2\, a6^2 + 348\, a3\, a5^2\, a6^2 + 348\, a4\, a5^2\, a6^2 + 76\, a5^3\, a6^2 + 76\, a1^2\, a6^3 + 183\, a1\, a2\, a6^3 + \\
& 76\, a2^2\, a6^3 + 183\, a1\, a3\, a6^3 + 183\, a2\, a3\, a6^3 + 76\, a3^2\, a6^3 + 183\, a1\, a4\, a6^3 + 183\, a2\, a4\, a6^3 + \\
& 183\, a3\, a4\, a6^3 + 76\, a4^2\, a6^3 + 183\, a1\, a5\, a6^3 + 183\, a2\, a5\, a6^3 + 183\, a3\, a5\, a6^3 + \\
& 183\, a4\, a5\, a6^3 + 76\, a5^2\, a6^3 + 21\, a1\, a6^4 + 21\, a2\, a6^4 + 21\, a3\, a6^4 + 21\, a4\, a6^4 + 21\, a5\, a6^4 + a6^5
\end{aligned}
$$

In[46]:=
```
G4 = SeriesCoefficient[%41, {t, 0, 4}]
```

Out[46]=

$$5\,a1^4 + 44\,a1^3\,a2 + 84\,a1^2\,a2^2 + 44\,a1\,a2^3 + 5\,a2^4 + 44\,a1^3\,a3 + 201\,a1^2\,a2\,a3 + 201\,a1\,a2^2\,a3 + 44\,a2^3\,a3 + 84\,a1^2\,a3^2 + 201\,a1\,a2\,a3^2 + 84\,a2^2\,a3^2 + 44\,a1\,a3^3 + 44\,a2\,a3^3 + 5\,a3^4 + 44\,a1^3\,a4 + 201\,a1^2\,a2\,a4 + 201\,a1\,a2^2\,a4 + 44\,a2^3\,a4 + 201\,a1^2\,a3\,a4 + 478\,a1\,a2\,a3\,a4 + 201\,a2^2\,a3\,a4 + 201\,a1\,a3^2\,a4 + 201\,a2\,a3^2\,a4 + 44\,a3^3\,a4 + 84\,a1^2\,a4^2 + 201\,a1\,a2\,a4^2 + 84\,a2^2\,a4^2 + 201\,a1\,a3\,a4^2 + 201\,a2\,a3\,a4^2 + 84\,a3^2\,a4^2 + 44\,a1\,a4^3 + 44\,a2\,a4^3 + 44\,a3\,a4^3 + 5\,a4^4 + 44\,a1^3\,a5 + 201\,a1^2\,a2\,a5 + 201\,a1\,a2^2\,a5 + 44\,a2^3\,a5 + 201\,a1^2\,a3\,a5 + 478\,a1\,a2\,a3\,a5 + 201\,a2^2\,a3\,a5 + 201\,a1\,a3^2\,a5 + 201\,a2\,a3^2\,a5 + 44\,a3^3\,a5 + 201\,a1^2\,a4\,a5 + 478\,a1\,a2\,a4\,a5 + 201\,a2^2\,a4\,a5 + 478\,a1\,a3\,a4\,a5 + 478\,a2\,a3\,a4\,a5 + 201\,a3^2\,a4\,a5 + 201\,a1\,a4^2\,a5 + 201\,a2\,a4^2\,a5 + 201\,a3\,a4^2\,a5 + 44\,a4^3\,a5 + 84\,a1^2\,a5^2 + 201\,a1\,a2\,a5^2 + 84\,a2^2\,a5^2 + 201\,a1\,a3\,a5^2 + 201\,a2\,a3\,a5^2 + 84\,a3^2\,a5^2 + 201\,a1\,a4\,a5^2 + 201\,a2\,a4\,a5^2 + 201\,a3\,a4\,a5^2 + 84\,a4^2\,a5^2 + 44\,a1\,a5^3 + 44\,a2\,a5^3 + 44\,a3\,a5^3 + 44\,a4\,a5^3 + 5\,a5^4 + 44\,a1^3\,a6 + 201\,a1^2\,a2\,a6 + 201\,a1\,a2^2\,a6 + 44\,a2^3\,a6 + 201\,a1^2\,a3\,a6 + 478\,a1\,a2\,a3\,a6 + 201\,a2^2\,a3\,a6 + 201\,a1\,a3^2\,a6 + 201\,a2\,a3^2\,a6 + 44\,a3^3\,a6 + 201\,a1^2\,a4\,a6 + 478\,a1\,a2\,a4\,a6 + 201\,a2^2\,a4\,a6 + 478\,a1\,a3\,a4\,a6 + 478\,a2\,a3\,a4\,a6 + 201\,a3^2\,a4\,a6 + 201\,a1\,a4^2\,a6 + 201\,a2\,a4^2\,a6 + 201\,a3\,a4^2\,a6 + 44\,a4^3\,a6 + 201\,a1^2\,a5\,a6 + 478\,a1\,a2\,a5\,a6 + 201\,a2^2\,a5\,a6 + 478\,a1\,a3\,a5\,a6 + 478\,a2\,a3\,a5\,a6 + 201\,a3^2\,a5\,a6 + 478\,a1\,a4\,a5\,a6 + 478\,a2\,a4\,a5\,a6 + 478\,a3\,a4\,a5\,a6 + 201\,a4^2\,a5\,a6 + 201\,a1\,a5^2\,a6 + 201\,a2\,a5^2\,a6 + 201\,a3\,a5^2\,a6 + 201\,a4\,a5^2\,a6 + 44\,a5^3\,a6 + 84\,a1^2\,a6^2 + 201\,a1\,a2\,a6^2 + 84\,a2^2\,a6^2 + 201\,a1\,a3\,a6^2 + 201\,a2\,a3\,a6^2 + 84\,a3^2\,a6^2 + 201\,a1\,a4\,a6^2 + 201\,a2\,a4\,a6^2 + 201\,a3\,a4\,a6^2 + 84\,a4^2\,a6^2 + 201\,a1\,a5\,a6^2 + 201\,a2\,a5\,a6^2 + 201\,a3\,a5\,a6^2 + 201\,a4\,a5\,a6^2 + 84\,a5^2\,a6^2 + 44\,a1\,a6^3 + 44\,a2\,a6^3 + 44\,a3\,a6^3 + 44\,a4\,a6^3 + 44\,a5\,a6^3 + 5\,a6^4$$

In[47]:=
```
G3 = SeriesCoefficient[%41, {t, 0, 3}]
```

Out[47]=

$$10\,a1^3 + 46\,a1^2\,a2 + 46\,a1\,a2^2 + 10\,a2^3 + 46\,a1^2\,a3 + 110\,a1\,a2\,a3 + 46\,a2^2\,a3 + 46\,a1\,a3^2 + 46\,a2\,a3^2 + 10\,a3^3 + 46\,a1^2\,a4 + 110\,a1\,a2\,a4 + 46\,a2^2\,a4 + 110\,a1\,a3\,a4 + 110\,a2\,a3\,a4 + 46\,a3^2\,a4 + 46\,a1\,a4^2 + 46\,a2\,a4^2 + 46\,a3\,a4^2 + 10\,a4^3 + 46\,a1^2\,a5 + 110\,a1\,a2\,a5 + 46\,a2^2\,a5 + 110\,a1\,a3\,a5 + 110\,a2\,a3\,a5 + 46\,a3^2\,a5 + 110\,a1\,a4\,a5 + 110\,a2\,a4\,a5 + 110\,a3\,a4\,a5 + 46\,a4^2\,a5 + 46\,a1\,a5^2 + 46\,a2\,a5^2 + 46\,a3\,a5^2 + 46\,a4\,a5^2 + 10\,a5^3 + 46\,a1^2\,a6 + 110\,a1\,a2\,a6 + 46\,a2^2\,a6 + 110\,a1\,a3\,a6 + 110\,a2\,a3\,a6 + 46\,a3^2\,a6 + 110\,a1\,a4\,a6 + 110\,a2\,a4\,a6 + 110\,a3\,a4\,a6 + 46\,a4^2\,a6 + 110\,a1\,a5\,a6 + 110\,a2\,a5\,a6 + 110\,a3\,a5\,a6 + 110\,a4\,a5\,a6 + 46\,a5^2\,a6 + 46\,a1\,a6^2 + 46\,a2\,a6^2 + 46\,a3\,a6^2 + 46\,a4\,a6^2 + 46\,a5\,a6^2 + 10\,a6^3$$

In[48]:=
```
G2 = SeriesCoefficient[%41, {t, 0, 2}]
```

Out[48]=

$$10\,a1^2 + 24\,a1\,a2 + 10\,a2^2 + 24\,a1\,a3 + 24\,a2\,a3 + 10\,a3^2 + 24\,a1\,a4 + 24\,a2\,a4 + 24\,a3\,a4 + 10\,a4^2 + 24\,a1\,a5 + 24\,a2\,a5 + 24\,a3\,a5 + 24\,a4\,a5 + 10\,a5^2 + 24\,a1\,a6 + 24\,a2\,a6 + 24\,a3\,a6 + 24\,a4\,a6 + 24\,a5\,a6 + 10\,a6^2$$

In[49]:=
```
G1 = SeriesCoefficient[%41, {t, 0, 1}]
```

Out[49]=

$$5\,(a1 + a2 + a3 + a4 + a5 + a6)$$

In[50]:=
```
SymmetricReduction[G8, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```

Out[50]=

$$\{4\, f1^2\, f2^3 + f2^4 + 9\, f1^3\, f2\, f3 + 15\, f1\, f2^2\, f3 + 6\, f1^2\, f3^2 + f1^4\, f4 + 8\, f1^2\, f2\, f4 + 2\, f2^2\, f4 - 8\, f1\, f3\, f4 - 7\, f4^2 - 16\, f1^3\, f5 - 26\, f1\, f2\, f5 - 3\, f3\, f5 - 94\, f1^2\, f6 - 24\, f2\, f6,\ 0\}$$

In[51]:=
```
k8 = First[%50]
```

Out[51]=

$$4\, f1^2\, f2^3 + f2^4 + 9\, f1^3\, f2\, f3 + 15\, f1\, f2^2\, f3 + 6\, f1^2\, f3^2 + f1^4\, f4 + 8\, f1^2\, f2\, f4 + 2\, f2^2\, f4 - 8\, f1\, f3\, f4 - 7\, f4^2 - 16\, f1^3\, f5 - 26\, f1\, f2\, f5 - 3\, f3\, f5 - 94\, f1^2\, f6 - 24\, f2\, f6$$

In[52]:=
```
SymmetricReduction[G7, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```

Out[52]=

$$\{6\, f1^3\, f2^2 + 8\, f1\, f2^3 + 3\, f1^4\, f3 + 24\, f1^2\, f2\, f3 + 6\, f2^2\, f3 + 3\, f1\, f3^2 + 2\, f1^3\, f4 + 2\, f1\, f2\, f4 - 6\, f3\, f4 - 32\, f1^2\, f5 - 12\, f2\, f5 - 78\, f1\, f6,\ 0\}$$

In[53]:=
```
k7 = First[%52]
```

Out[53]=

$$6\, f1^3\, f2^2 + 8\, f1\, f2^3 + 3\, f1^4\, f3 + 24\, f1^2\, f2\, f3 + 6\, f2^2\, f3 + 3\, f1\, f3^2 + 2\, f1^3\, f4 + 2\, f1\, f2\, f4 - 6\, f3\, f4 - 32\, f1^2\, f5 - 12\, f2\, f5 - 78\, f1\, f6$$

In[54]:=
```
SymmetricReduction[G6, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```

Out[54]=

$$\{4\, f1^4\, f2 + 18\, f1^2\, f2^2 + 4\, f2^3 + 11\, f1^3\, f3 + 21\, f1\, f2\, f3 - f1^2\, f4 - 2\, f2\, f4 - 29\, f1\, f5 - 26\, f6,\ 0\}$$

In[55]:=
```
k6 = First[%54]
```

Out[55]=

$$4\, f1^4\, f2 + 18\, f1^2\, f2^2 + 4\, f2^3 + 11\, f1^3\, f3 + 21\, f1\, f2\, f3 - f1^2\, f4 - 2\, f2\, f4 - 29\, f1\, f5 - 26\, f6$$

In[56]:=
```
SymmetricReduction[G5, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```

Out[56]=

$$\{f1^5 + 16\, f1^3\, f2 + 18\, f1\, f2^2 + 15\, f1^2\, f3 + 6\, f2\, f3 - 4\, f1\, f4 - 10\, f5,\ 0\}$$

In[57]:=
```
k5 = First[%56]
```

Out[57]=

$$f1^5 + 16\, f1^3\, f2 + 18\, f1\, f2^2 + 15\, f1^2\, f3 + 6\, f2\, f3 - 4\, f1\, f4 - 10\, f5$$

In[58]:=
```
SymmetricReduction[G4, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```

Out[58]=

$$\{5\, f1^4 + 24\, f1^2\, f2 + 6\, f2^2 + 9\, f1\, f3 - 2\, f4,\ 0\}$$

In[59]:=
```
k4 = First[%58]
```

Out[59]=

$$5\, f1^4 + 24\, f1^2\, f2 + 6\, f2^2 + 9\, f1\, f3 - 2\, f4$$

In[60]:=
```
SymmetricReduction[G3, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```

Out[60]=

$$\{10\, f1^3 + 16\, f1\, f2 + 2\, f3,\ 0\}$$

In[61]:=
```
k3 = First[%60]
```

Out[61]=

$$10\, f1^3 + 16\, f1\, f2 + 2\, f3$$

In[62]:=
```
SymmetricReduction[G2, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[62]=

$\{10\, f1^2 + 4\, f2,\ 0\}$

In[63]:=
```
k2 = First[%62]
```
Out[63]=

$10\, f1^2 + 4\, f2$

In[64]:=
```
SymmetricReduction[G1, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[64]=

$\{5\, f1,\ 0\}$

In[65]:=
```
k1 = First[%64]
```
Out[65]=

$5\, f1$

In[66]:=
```
Expand[(1 + (a1 + a2 + a3) * t) * (1 + (a1 + a2 + a4) * t) *
  (1 + (a1 + a2 + a5) * t) * (1 + (a1 + a2 + a6) * t) * (1 + (a1 + a3 + a4) * t) *
  (1 + (a1 + a3 + a5) * t) * (1 + (a1 + a3 + a6) * t) * (1 + (a1 + a4 + a5) * t) *
  (1 + (a1 + a4 + a6) * t) * (1 + (a1 + a5 + a6) * t) * (1 + (a2 + a3 + a4) * t) *
  (1 + (a2 + a3 + a5) * t) * (1 + (a2 + a3 + a6) * t) * (1 + (a2 + a4 + a5) * t) *
  (1 + (a2 + a4 + a6) * t) * (1 + (a2 + a5 + a6) * t) * (1 + (a3 + a4 + a5) * t) *
  (1 + (a3 + a4 + a6) * t) * (1 + (a3 + a5 + a6) * t) * (1 + (a4 + a5 + a6) * t)]
```
Out[66]=

$1 + 10\, a1\, t + 10\, a2\, t + 10\, a3\, t + 10\, a4\, t + 10\, a5\, t + 10\, a6\, t + 45\, a1^2\, t^2 +$ ··· 196 524 ··· $+$
$4\, a1\, a2\, a4^2\, a5^6\, a6^{10}\, t^{20} + 2\, a2^2\, a4^2\, a5^6\, a6^{10}\, t^{20} + 4\, a1\, a3\, a4^2\, a5^6\, a6^{10}\, t^{20} + 4\, a2\, a3\, a4^2\, a5^6\, a6^{10}\, t^{20} +$
$2\, a3^2\, a4^2\, a5^6\, a6^{10}\, t^{20} + a1\, a4^3\, a5^6\, a6^{10}\, t^{20} + a2\, a4^3\, a5^6\, a6^{10}\, t^{20} + a3\, a4^3\, a5^6\, a6^{10}\, t^{20}$

Size in memory: 88.9 MB | + Show more | Show all | Iconize | Store full expression in notebook

In[67]:=
```
H8 = SeriesCoefficient[%66, {t, 0, 8}]
```
Out[67]=

$45\, a1^8 + 864\, a1^7\, a2 + 5334\, a1^6\, a2^2 + 14\,700\, a1^5\, a2^3 + 20\,385\, a1^4\, a2^4 + 14\,700\, a1^3\, a2^5 +$
$5334\, a1^2\, a2^6 + 864\, a1\, a2^7 + 45\, a2^8 + 864\, a1^7\, a3 + 11\,382\, a1^6\, a2\, a3 + 50\,589\, a1^5\, a2^2\, a3 +$
$101\,835\, a1^4\, a2^3\, a3 + 101\,835\, a1^3\, a2^4\, a3 + 50\,589\, a1^2\, a2^5\, a3 + 11\,382\, a1\, a2^6\, a3 +$
$864\, a2^7\, a3 + 5334\, a1^6\, a3^2 + 50\,589\, a1^5\, a2\, a3^2 + 164\,205\, a1^4\, a2^2\, a3^2 + 238\,338\, a1^3\, a2^3\, a3^2 +$
$164\,205\, a1^2\, a2^4\, a3^2 + 50\,589\, a1\, a2^5\, a3^2 + 5334\, a2^6\, a3^2 + 14\,700\, a1^5\, a3^3 + 101\,835\, a1^4\, a2\, a3^3 +$
$238\,338\, a1^3\, a2^2\, a3^3 + 238\,338\, a1^2\, a2^3\, a3^3 + 101\,835\, a1\, a2^4\, a3^3 + 14\,700\, a2^5\, a3^3 +$
$20\,385\, a1^4\, a3^4 + 101\,835\, a1^3\, a2\, a3^4 + 164\,205\, a1^2\, a2^2\, a3^4 + 101\,835\, a1\, a2^3\, a3^4 +$
$20\,385\, a2^4\, a3^4 + 14\,700\, a1^3\, a3^5 + 50\,589\, a1^2\, a2\, a3^5 + 50\,589\, a1\, a2^2\, a3^5 + 14\,700\, a2^3\, a3^5 +$
$5334\, a1^2\, a3^6 + 11\,382\, a1\, a2\, a3^6 + 5334\, a2^2\, a3^6 + 864\, a1\, a3^7 + 864\, a2\, a3^7 + 45\, a3^8 +$
$864\, a1^7\, a4 + 11\,382\, a1^6\, a2\, a4 + 50\,589\, a1^5\, a2^2\, a4 + 101\,835\, a1^4\, a2^3\, a4 + 101\,835\, a1^3\, a2^4\, a4 +$
$50\,589\, a1^2\, a2^5\, a4 + 11\,382\, a1\, a2^6\, a4 + 864\, a2^7\, a4 + 11\,382\, a1^6\, a3\, a4 + 107\,436\, a1^5\, a2\, a3\, a4 +$
$347\,841\, a1^4\, a2^2\, a3\, a4 + 504\,482\, a1^3\, a2^3\, a3\, a4 + 347\,841\, a1^2\, a2^4\, a3\, a4 + 107\,436\, a1\, a2^5\, a3\, a4 +$
$11\,382\, a2^6\, a3\, a4 + 50\,589\, a1^5\, a3^2\, a4 + 347\,841\, a1^4\, a2\, a3^2\, a4 + 811\,344\, a1^3\, a2^2\, a3^2\, a4 +$
$811\,344\, a1^2\, a2^3\, a3^2\, a4 + 347\,841\, a1\, a2^4\, a3^2\, a4 + 50\,589\, a2^5\, a3^2\, a4 + 101\,835\, a1^4\, a3^3\, a4 +$
$504\,482\, a1^3\, a2\, a3^3\, a4 + 811\,344\, a1^2\, a2^2\, a3^3\, a4 + 504\,482\, a1\, a2^3\, a3^3\, a4 +$
$101\,835\, a2^4\, a3^3\, a4 + 101\,835\, a1^3\, a3^4\, a4 + 347\,841\, a1^2\, a2\, a3^4\, a4 + 347\,841\, a1\, a2^2\, a3^4\, a4 +$
$101\,835\, a2^3\, a3^4\, a4 + 50\,589\, a1^2\, a3^5\, a4 + 107\,436\, a1\, a2\, a3^5\, a4 + 50\,589\, a2^2\, a3^5\, a4 +$

$11\,382\ a1\ a3^6\ a4 + 11\,382\ a2\ a3^6\ a4 + 864\ a3^7\ a4 + 5334\ a1^6\ a4^2 + 50\,589\ a1^5\ a2\ a4^2 +$
$164\,205\ a1^4\ a2^2\ a4^2 + 238\,338\ a1^3\ a2^3\ a4^2 + 164\,205\ a1^2\ a2^4\ a4^2 + 50\,589\ a1\ a2^5\ a4^2 +$
$5334\ a2^6\ a4^2 + 50\,589\ a1^5\ a3\ a4^2 + 347\,841\ a1^4\ a2\ a3\ a4^2 + 811\,344\ a1^3\ a2^2\ a3\ a4^2 +$
$811\,344\ a1^2\ a2^3\ a3\ a4^2 + 347\,841\ a1\ a2^4\ a3\ a4^2 + 50\,589\ a2^5\ a3\ a4^2 + 164\,205\ a1^4\ a3^2\ a4^2 +$
$811\,344\ a1^3\ a2\ a3^2\ a4^2 + 1\,303\,803\ a1^2\ a2^2\ a3^2\ a4^2 + 811\,344\ a1\ a2^3\ a3^2\ a4^2 +$
$164\,205\ a2^4\ a3^2\ a4^2 + 238\,338\ a1^3\ a3^3\ a4^2 + 811\,344\ a1^2\ a2\ a3^3\ a4^2 + 811\,344\ a1\ a2^2\ a3^3\ a4^2 +$
$238\,338\ a2^3\ a3^3\ a4^2 + 164\,205\ a1^2\ a3^4\ a4^2 + 347\,841\ a1\ a2\ a3^4\ a4^2 + 164\,205\ a2^2\ a3^4\ a4^2 +$
$50\,589\ a1\ a3^5\ a4^2 + 50\,589\ a2\ a3^5\ a4^2 + 5334\ a3^6\ a4^2 + 14\,700\ a1^5\ a4^3 + 101\,835\ a1^4\ a2\ a4^3 +$
$238\,338\ a1^3\ a2^2\ a4^3 + 238\,338\ a1^2\ a2^3\ a4^3 + 101\,835\ a1\ a2^4\ a4^3 + 14\,700\ a2^5\ a4^3 +$
$101\,835\ a1^4\ a3\ a4^3 + 504\,482\ a1^3\ a2\ a3\ a4^3 + 811\,344\ a1^2\ a2^2\ a3\ a4^3 + 504\,482\ a1\ a2^3\ a3\ a4^3 +$
$101\,835\ a2^4\ a3\ a4^3 + 238\,338\ a1^3\ a3^2\ a4^3 + 811\,344\ a1^2\ a2\ a3^2\ a4^3 + 811\,344\ a1\ a2^2\ a3^2\ a4^3 +$
$238\,338\ a2^3\ a3^2\ a4^3 + 238\,338\ a1^2\ a3^3\ a4^3 + 504\,482\ a1\ a2\ a3^3\ a4^3 + 238\,338\ a2^2\ a3^3\ a4^3 +$
$101\,835\ a1\ a3^4\ a4^3 + 101\,835\ a2\ a3^4\ a4^3 + 14\,700\ a3^5\ a4^3 + 20\,385\ a1^4\ a4^4 +$
$101\,835\ a1^3\ a2\ a4^4 + 164\,205\ a1^2\ a2^2\ a4^4 + 101\,835\ a1\ a2^3\ a4^4 + 20\,385\ a2^4\ a4^4 +$
$101\,835\ a1^3\ a3\ a4^4 + 347\,841\ a1^2\ a2\ a3\ a4^4 + 347\,841\ a1\ a2^2\ a3\ a4^4 + 101\,835\ a2^3\ a3\ a4^4 +$
$164\,205\ a1^2\ a3^2\ a4^4 + 347\,841\ a1\ a2\ a3^2\ a4^4 + 164\,205\ a2^2\ a3^2\ a4^4 + 101\,835\ a1\ a3^3\ a4^4 +$
$101\,835\ a2\ a3^3\ a4^4 + 20\,385\ a3^4\ a4^4 + 14\,700\ a1^3\ a4^5 + 50\,589\ a1^2\ a2\ a4^5 + 50\,589\ a1\ a2^2\ a4^5 +$
$14\,700\ a2^3\ a4^5 + 50\,589\ a1^2\ a3\ a4^5 + 107\,436\ a1\ a2\ a3\ a4^5 + 50\,589\ a2^2\ a3\ a4^5 +$
$50\,589\ a1\ a3^2\ a4^5 + 50\,589\ a2\ a3^2\ a4^5 + 14\,700\ a3^3\ a4^5 + 5334\ a1^2\ a4^6 + 11\,382\ a1\ a2\ a4^6 +$
$5334\ a2^2\ a4^6 + 11\,382\ a1\ a3\ a4^6 + 11\,382\ a2\ a3\ a4^6 + 5334\ a3^2\ a4^6 + 864\ a1\ a4^7 +$
$864\ a2\ a4^7 + 864\ a3\ a4^7 + 45\ a4^8 + 864\ a1^7\ a5 + 11\,382\ a1^6\ a2\ a5 + 50\,589\ a1^5\ a2^2\ a5 +$
$101\,835\ a1^4\ a2^3\ a5 + 101\,835\ a1^3\ a2^4\ a5 + 50\,589\ a1^2\ a2^5\ a5 + 11\,382\ a1\ a2^6\ a5 +$
$864\ a2^7\ a5 + 11\,382\ a1^6\ a3\ a5 + 107\,436\ a1^5\ a2\ a3\ a5 + 347\,841\ a1^4\ a2^2\ a3\ a5 +$
$504\,482\ a1^3\ a2^3\ a3\ a5 + 347\,841\ a1^2\ a2^4\ a3\ a5 + 107\,436\ a1\ a2^5\ a3\ a5 + 11\,382\ a2^6\ a3\ a5 +$
$50\,589\ a1^5\ a3^2\ a5 + 347\,841\ a1^4\ a2\ a3^2\ a5 + 811\,344\ a1^3\ a2^2\ a3^2\ a5 + 811\,344\ a1^2\ a2^3\ a3^2\ a5 +$
$347\,841\ a1\ a2^4\ a3^2\ a5 + 50\,589\ a2^5\ a3^2\ a5 + 101\,835\ a1^4\ a3^3\ a5 + 504\,482\ a1^3\ a2\ a3^3\ a5 +$
$811\,344\ a1^2\ a2^2\ a3^3\ a5 + 504\,482\ a1\ a2^3\ a3^3\ a5 + 101\,835\ a2^4\ a3^3\ a5 + 101\,835\ a1^3\ a3^4\ a5 +$
$347\,841\ a1^2\ a2\ a3^4\ a5 + 347\,841\ a1\ a2^2\ a3^4\ a5 + 101\,835\ a2^3\ a3^4\ a5 + 50\,589\ a1^2\ a3^5\ a5 +$
$107\,436\ a1\ a2\ a3^5\ a5 + 50\,589\ a2^2\ a3^5\ a5 + 11\,382\ a1\ a3^6\ a5 + 11\,382\ a2\ a3^6\ a5 + 864\ a3^7\ a5 +$
$11\,382\ a1^6\ a4\ a5 + 107\,436\ a1^5\ a2\ a4\ a5 + 347\,841\ a1^4\ a2^2\ a4\ a5 + 504\,482\ a1^3\ a2^3\ a4\ a5 +$
$347\,841\ a1^2\ a2^4\ a4\ a5 + 107\,436\ a1\ a2^5\ a4\ a5 + 11\,382\ a2^6\ a4\ a5 + 107\,436\ a1^5\ a3\ a4\ a5 +$
$736\,479\ a1^4\ a2\ a3\ a4\ a5 + 1\,715\,511\ a1^3\ a2^2\ a3\ a4\ a5 + 1\,715\,511\ a1^2\ a2^3\ a3\ a4\ a5 +$
$736\,479\ a1\ a2^4\ a3\ a4\ a5 + 107\,436\ a2^5\ a3\ a4\ a5 + 347\,841\ a1^4\ a3^2\ a4\ a5 +$
$1\,715\,511\ a1^3\ a2\ a3^2\ a4\ a5 + 2\,755\,215\ a1^2\ a2^2\ a3^2\ a4\ a5 + 1\,715\,511\ a1\ a2^3\ a3^2\ a4\ a5 +$
$347\,841\ a2^4\ a3^2\ a4\ a5 + 504\,482\ a1^3\ a3^3\ a4\ a5 + 1\,715\,511\ a1^2\ a2\ a3^3\ a4\ a5 +$
$1\,715\,511\ a1\ a2^2\ a3^3\ a4\ a5 + 504\,482\ a2^3\ a3^3\ a4\ a5 + 347\,841\ a1^2\ a3^4\ a4\ a5 +$
$736\,479\ a1\ a2\ a3^4\ a4\ a5 + 347\,841\ a2^2\ a3^4\ a4\ a5 + 107\,436\ a1\ a3^5\ a4\ a5 +$
$107\,436\ a2\ a3^5\ a4\ a5 + 11\,382\ a3^6\ a4\ a5 + 50\,589\ a1^5\ a4^2\ a5 + 347\,841\ a1^4\ a2\ a4^2\ a5 +$
$811\,344\ a1^3\ a2^2\ a4^2\ a5 + 811\,344\ a1^2\ a2^3\ a4^2\ a5 + 347\,841\ a1\ a2^4\ a4^2\ a5 + 50\,589\ a2^5\ a4^2\ a5 +$
$347\,841\ a1^4\ a3\ a4^2\ a5 + 1\,715\,511\ a1^3\ a2\ a3\ a4^2\ a5 + 2\,755\,215\ a1^2\ a2^2\ a3\ a4^2\ a5 +$
$1\,715\,511\ a1\ a2^3\ a3\ a4^2\ a5 + 347\,841\ a2^4\ a3\ a4^2\ a5 + 811\,344\ a1^3\ a3^2\ a4^2\ a5 +$
$2\,755\,215\ a1^2\ a2\ a3^2\ a4^2\ a5 + 2\,755\,215\ a1\ a2^2\ a3^2\ a4^2\ a5 + 811\,344\ a2^3\ a3^2\ a4^2\ a5 +$
$811\,344\ a1^2\ a3^3\ a4^2\ a5 + 1\,715\,511\ a1\ a2\ a3^3\ a4^2\ a5 + 811\,344\ a2^2\ a3^3\ a4^2\ a5 +$
$347\,841\ a1\ a3^4\ a4^2\ a5 + 347\,841\ a2\ a3^4\ a4^2\ a5 + 50\,589\ a3^5\ a4^2\ a5 + 101\,835\ a1^4\ a4^3\ a5 +$
$504\,482\ a1^3\ a2\ a4^3\ a5 + 811\,344\ a1^2\ a2^2\ a4^3\ a5 + 504\,482\ a1\ a2^3\ a4^3\ a5 + 101\,835\ a2^4\ a4^3\ a5 +$
$504\,482\ a1^3\ a3\ a4^3\ a5 + 1\,715\,511\ a1^2\ a2\ a3\ a4^3\ a5 + 1\,715\,511\ a1\ a2^2\ a3\ a4^3\ a5 +$
$504\,482\ a2^3\ a3\ a4^3\ a5 + 811\,344\ a1^2\ a3^2\ a4^3\ a5 + 1\,715\,511\ a1\ a2\ a3^2\ a4^3\ a5 +$

$811\,344\ a2^2\ a3^2\ a4^3\ a5 + 504\,482\ a1\ a3^3\ a4^3\ a5 + 504\,482\ a2\ a3^3\ a4^3\ a5 + 101\,835\ a3^4\ a4^3\ a5 +$
$101\,835\ a1^3\ a4^4\ a5 + 347\,841\ a1^2\ a2\ a4^4\ a5 + 347\,841\ a1\ a2^2\ a4^4\ a5 + 101\,835\ a2^3\ a4^4\ a5 +$
$347\,841\ a1^2\ a3\ a4^4\ a5 + 736\,479\ a1\ a2\ a3\ a4^4\ a5 + 347\,841\ a2^2\ a3\ a4^4\ a5 +$
$347\,841\ a1\ a3^2\ a4^4\ a5 + 347\,841\ a2\ a3^2\ a4^4\ a5 + 101\,835\ a3^3\ a4^4\ a5 + 50\,589\ a1^2\ a4^5\ a5 +$
$107\,436\ a1\ a2\ a4^5\ a5 + 50\,589\ a2^2\ a4^5\ a5 + 107\,436\ a1\ a3\ a4^5\ a5 + 107\,436\ a2\ a3\ a4^5\ a5 +$
$50\,589\ a3^2\ a4^5\ a5 + 11\,382\ a1\ a4^6\ a5 + 11\,382\ a2\ a4^6\ a5 + 11\,382\ a3\ a4^6\ a5 + 864\ a4^7\ a5 +$
$5334\ a1^6\ a5^2 + 50\,589\ a1^5\ a2\ a5^2 + 164\,205\ a1^4\ a2^2\ a5^2 + 238\,338\ a1^3\ a2^3\ a5^2 +$
$164\,205\ a1^2\ a2^4\ a5^2 + 50\,589\ a1\ a2^5\ a5^2 + 5334\ a2^6\ a5^2 + 50\,589\ a1^5\ a3\ a5^2 +$
$347\,841\ a1^4\ a2\ a3\ a5^2 + 811\,344\ a1^3\ a2^2\ a3\ a5^2 + 811\,344\ a1^2\ a2^3\ a3\ a5^2 +$
$347\,841\ a1\ a2^4\ a3\ a5^2 + 50\,589\ a2^5\ a3\ a5^2 + 164\,205\ a1^4\ a3^2\ a5^2 + 811\,344\ a1^3\ a2\ a3^2\ a5^2 +$
$1\,303\,803\ a1^2\ a2^2\ a3^2\ a5^2 + 811\,344\ a1\ a2^3\ a3^2\ a5^2 + 164\,205\ a2^4\ a3^2\ a5^2 +$
$238\,338\ a1^3\ a3^3\ a5^2 + 811\,344\ a1^2\ a2\ a3^3\ a5^2 + 811\,344\ a1\ a2^2\ a3^3\ a5^2 + 238\,338\ a2^3\ a3^3\ a5^2 +$
$164\,205\ a1^2\ a3^4\ a5^2 + 347\,841\ a1\ a2\ a3^4\ a5^2 + 164\,205\ a2^2\ a3^4\ a5^2 + 50\,589\ a1\ a3^5\ a5^2 +$
$50\,589\ a2\ a3^5\ a5^2 + 5334\ a3^6\ a5^2 + 50\,589\ a1^5\ a4\ a5^2 + 347\,841\ a1^4\ a2\ a4\ a5^2 +$
$811\,344\ a1^3\ a2^2\ a4\ a5^2 + 811\,344\ a1^2\ a2^3\ a4\ a5^2 + 347\,841\ a1\ a2^4\ a4\ a5^2 + 50\,589\ a2^5\ a4\ a5^2 +$
$347\,841\ a1^4\ a3\ a4\ a5^2 + 1\,715\,511\ a1^3\ a2\ a3\ a4\ a5^2 + 2\,755\,215\ a1^2\ a2^2\ a3\ a4\ a5^2 +$
$1\,715\,511\ a1\ a2^3\ a3\ a4\ a5^2 + 347\,841\ a2^4\ a3\ a4\ a5^2 + 811\,344\ a1^3\ a3^2\ a4\ a5^2 +$
$2\,755\,215\ a1^2\ a2\ a3^2\ a4\ a5^2 + 2\,755\,215\ a1\ a2^2\ a3^2\ a4\ a5^2 + 811\,344\ a2^3\ a3^2\ a4\ a5^2 +$
$811\,344\ a1^2\ a3^3\ a4\ a5^2 + 1\,715\,511\ a1\ a2\ a3^3\ a4\ a5^2 + 811\,344\ a2^2\ a3^3\ a4\ a5^2 +$
$347\,841\ a1\ a3^4\ a4\ a5^2 + 347\,841\ a2\ a3^4\ a4\ a5^2 + 50\,589\ a3^5\ a4\ a5^2 + 164\,205\ a1^4\ a4^2\ a5^2 +$
$811\,344\ a1^3\ a2\ a4^2\ a5^2 + 1\,303\,803\ a1^2\ a2^2\ a4^2\ a5^2 + 811\,344\ a1\ a2^3\ a4^2\ a5^2 +$
$164\,205\ a2^4\ a4^2\ a5^2 + 811\,344\ a1^3\ a3\ a4^2\ a5^2 + 2\,755\,215\ a1^2\ a2\ a3\ a4^2\ a5^2 +$
$2\,755\,215\ a1\ a2^2\ a3\ a4^2\ a5^2 + 811\,344\ a2^3\ a3\ a4^2\ a5^2 + 1\,303\,803\ a1^2\ a3^2\ a4^2\ a5^2 +$
$2\,755\,215\ a1\ a2\ a3^2\ a4^2\ a5^2 + 1\,303\,803\ a2^2\ a3^2\ a4^2\ a5^2 + 811\,344\ a1\ a3^3\ a4^2\ a5^2 +$
$811\,344\ a2\ a3^3\ a4^2\ a5^2 + 164\,205\ a3^4\ a4^2\ a5^2 + 238\,338\ a1^3\ a4^3\ a5^2 + 811\,344\ a1^2\ a2\ a4^3\ a5^2 +$
$811\,344\ a1\ a2^2\ a4^3\ a5^2 + 238\,338\ a2^3\ a4^3\ a5^2 + 811\,344\ a1^2\ a3\ a4^3\ a5^2 +$
$1\,715\,511\ a1\ a2\ a3\ a4^3\ a5^2 + 811\,344\ a2^2\ a3\ a4^3\ a5^2 + 811\,344\ a1\ a3^2\ a4^3\ a5^2 +$
$811\,344\ a2\ a3^2\ a4^3\ a5^2 + 238\,338\ a3^3\ a4^3\ a5^2 + 164\,205\ a1^2\ a4^4\ a5^2 + 347\,841\ a1\ a2\ a4^4\ a5^2 +$
$164\,205\ a2^2\ a4^4\ a5^2 + 347\,841\ a1\ a3\ a4^4\ a5^2 + 347\,841\ a2\ a3\ a4^4\ a5^2 + 164\,205\ a3^2\ a4^4\ a5^2 +$
$50\,589\ a1\ a4^5\ a5^2 + 50\,589\ a2\ a4^5\ a5^2 + 50\,589\ a3\ a4^5\ a5^2 + 5334\ a4^6\ a5^2 + 14\,700\ a1^5\ a5^3 +$
$101\,835\ a1^4\ a2\ a5^3 + 238\,338\ a1^3\ a2^2\ a5^3 + 238\,338\ a1^2\ a2^3\ a5^3 + 101\,835\ a1\ a2^4\ a5^3 +$
$14\,700\ a2^5\ a5^3 + 101\,835\ a1^4\ a3\ a5^3 + 504\,482\ a1^3\ a2\ a3\ a5^3 + 811\,344\ a1^2\ a2^2\ a3\ a5^3 +$
$504\,482\ a1\ a2^3\ a3\ a5^3 + 101\,835\ a2^4\ a3\ a5^3 + 238\,338\ a1^3\ a3^2\ a5^3 + 811\,344\ a1^2\ a2\ a3^2\ a5^3 +$
$811\,344\ a1\ a2^2\ a3^2\ a5^3 + 238\,338\ a2^3\ a3^2\ a5^3 + 238\,338\ a1^2\ a3^3\ a5^3 + 504\,482\ a1\ a2\ a3^3\ a5^3 +$
$238\,338\ a2^2\ a3^3\ a5^3 + 101\,835\ a1\ a3^4\ a5^3 + 101\,835\ a2\ a3^4\ a5^3 + 14\,700\ a3^5\ a5^3 +$
$101\,835\ a1^4\ a4\ a5^3 + 504\,482\ a1^3\ a2\ a4\ a5^3 + 811\,344\ a1^2\ a2^2\ a4\ a5^3 + 504\,482\ a1\ a2^3\ a4\ a5^3 +$
$101\,835\ a2^4\ a4\ a5^3 + 504\,482\ a1^3\ a3\ a4\ a5^3 + 1\,715\,511\ a1^2\ a2\ a3\ a4\ a5^3 +$
$1\,715\,511\ a1\ a2^2\ a3\ a4\ a5^3 + 504\,482\ a2^3\ a3\ a4\ a5^3 + 811\,344\ a1^2\ a3^2\ a4\ a5^3 +$
$1\,715\,511\ a1\ a2\ a3^2\ a4\ a5^3 + 811\,344\ a2^2\ a3^2\ a4\ a5^3 + 504\,482\ a1\ a3^3\ a4\ a5^3 +$
$504\,482\ a2\ a3^3\ a4\ a5^3 + 101\,835\ a3^4\ a4\ a5^3 + 238\,338\ a1^3\ a4^2\ a5^3 + 811\,344\ a1^2\ a2\ a4^2\ a5^3 +$
$811\,344\ a1\ a2^2\ a4^2\ a5^3 + 238\,338\ a2^3\ a4^2\ a5^3 + 811\,344\ a1^2\ a3\ a4^2\ a5^3 +$
$1\,715\,511\ a1\ a2\ a3\ a4^2\ a5^3 + 811\,344\ a2^2\ a3\ a4^2\ a5^3 + 811\,344\ a1\ a3^2\ a4^2\ a5^3 +$
$811\,344\ a2\ a3^2\ a4^2\ a5^3 + 238\,338\ a3^3\ a4^2\ a5^3 + 238\,338\ a1^2\ a4^3\ a5^3 + 504\,482\ a1\ a2\ a4^3\ a5^3 +$
$238\,338\ a2^2\ a4^3\ a5^3 + 504\,482\ a1\ a3\ a4^3\ a5^3 + 504\,482\ a2\ a3\ a4^3\ a5^3 + 238\,338\ a3^2\ a4^3\ a5^3 +$
$101\,835\ a1\ a4^4\ a5^3 + 101\,835\ a2\ a4^4\ a5^3 + 101\,835\ a3\ a4^4\ a5^3 + 14\,700\ a4^5\ a5^3 +$
$20\,385\ a1^4\ a5^4 + 101\,835\ a1^3\ a2\ a5^4 + 164\,205\ a1^2\ a2^2\ a5^4 + 101\,835\ a1\ a2^3\ a5^4 +$
$20\,385\ a2^4\ a5^4 + 101\,835\ a1^3\ a3\ a5^4 + 347\,841\ a1^2\ a2\ a3\ a5^4 + 347\,841\ a1\ a2^2\ a3\ a5^4 +$

$101\,835\ a2^3\ a3\ a5^4 + 164\,205\ a1^2\ a3^2\ a5^4 + 347\,841\ a1\ a2\ a3^2\ a5^4 + 164\,205\ a2^2\ a3^2\ a5^4 +$
$101\,835\ a1\ a3^3\ a5^4 + 101\,835\ a2\ a3^3\ a5^4 + 20\,385\ a3^4\ a5^4 + 101\,835\ a1^3\ a4\ a5^4 +$
$347\,841\ a1^2\ a2\ a4\ a5^4 + 347\,841\ a1\ a2^2\ a4\ a5^4 + 101\,835\ a2^3\ a4\ a5^4 + 347\,841\ a1^2\ a3\ a4\ a5^4 +$
$736\,479\ a1\ a2\ a3\ a4\ a5^4 + 347\,841\ a2^2\ a3\ a4\ a5^4 + 347\,841\ a1\ a3^2\ a4\ a5^4 +$
$347\,841\ a2\ a3^2\ a4\ a5^4 + 101\,835\ a3^3\ a4\ a5^4 + 164\,205\ a1^2\ a4^2\ a5^4 + 347\,841\ a1\ a2\ a4^2\ a5^4 +$
$164\,205\ a2^2\ a4^2\ a5^4 + 347\,841\ a1\ a3\ a4^2\ a5^4 + 347\,841\ a2\ a3\ a4^2\ a5^4 + 164\,205\ a3^2\ a4^2\ a5^4 +$
$101\,835\ a1\ a4^3\ a5^4 + 101\,835\ a2\ a4^3\ a5^4 + 101\,835\ a3\ a4^3\ a5^4 + 20\,385\ a4^4\ a5^4 +$
$14\,700\ a1^3\ a5^5 + 50\,589\ a1^2\ a2\ a5^5 + 50\,589\ a1\ a2^2\ a5^5 + 14\,700\ a2^3\ a5^5 + 50\,589\ a1^2\ a3\ a5^5 +$
$107\,436\ a1\ a2\ a3\ a5^5 + 50\,589\ a2^2\ a3\ a5^5 + 50\,589\ a1\ a3^2\ a5^5 + 50\,589\ a2\ a3^2\ a5^5 +$
$14\,700\ a3^3\ a5^5 + 50\,589\ a1^2\ a4\ a5^5 + 107\,436\ a1\ a2\ a4\ a5^5 + 50\,589\ a2^2\ a4\ a5^5 +$
$107\,436\ a1\ a3\ a4\ a5^5 + 107\,436\ a2\ a3\ a4\ a5^5 + 50\,589\ a3^2\ a4\ a5^5 + 50\,589\ a1\ a4^2\ a5^5 +$
$50\,589\ a2\ a4^2\ a5^5 + 50\,589\ a3\ a4^2\ a5^5 + 14\,700\ a4^3\ a5^5 + 5334\ a1^2\ a5^6 + 11\,382\ a1\ a2\ a5^6 +$
$5334\ a2^2\ a5^6 + 11\,382\ a1\ a3\ a5^6 + 11\,382\ a2\ a3\ a5^6 + 5334\ a3^2\ a5^6 + 11\,382\ a1\ a4\ a5^6 +$
$11\,382\ a2\ a4\ a5^6 + 11\,382\ a3\ a4\ a5^6 + 5334\ a4^2\ a5^6 + 864\ a1\ a5^7 + 864\ a2\ a5^7 +$
$864\ a3\ a5^7 + 864\ a4\ a5^7 + 45\ a5^8 + 864\ a1^7\ a6 + 11\,382\ a1^6\ a2\ a6 + 50\,589\ a1^5\ a2^2\ a6 +$
$101\,835\ a1^4\ a2^3\ a6 + 101\,835\ a1^3\ a2^4\ a6 + 50\,589\ a1^2\ a2^5\ a6 + 11\,382\ a1\ a2^6\ a6 +$
$864\ a2^7\ a6 + 11\,382\ a1^6\ a3\ a6 + 107\,436\ a1^5\ a2\ a3\ a6 + 347\,841\ a1^4\ a2^2\ a3\ a6 +$
$504\,482\ a1^3\ a2^3\ a3\ a6 + 347\,841\ a1^2\ a2^4\ a3\ a6 + 107\,436\ a1\ a2^5\ a3\ a6 + 11\,382\ a2^6\ a3\ a6 +$
$50\,589\ a1^5\ a3^2\ a6 + 347\,841\ a1^4\ a2\ a3^2\ a6 + 811\,344\ a1^3\ a2^2\ a3^2\ a6 + 811\,344\ a1^2\ a2^3\ a3^2\ a6 +$
$347\,841\ a1\ a2^4\ a3^2\ a6 + 50\,589\ a2^5\ a3^2\ a6 + 101\,835\ a1^4\ a3^3\ a6 + 504\,482\ a1^3\ a2\ a3^3\ a6 +$
$811\,344\ a1^2\ a2^2\ a3^3\ a6 + 504\,482\ a1\ a2^3\ a3^3\ a6 + 101\,835\ a2^4\ a3^3\ a6 + 101\,835\ a1^3\ a3^4\ a6 +$
$347\,841\ a1^2\ a2\ a3^4\ a6 + 347\,841\ a1\ a2^2\ a3^4\ a6 + 101\,835\ a2^3\ a3^4\ a6 + 50\,589\ a1^2\ a3^5\ a6 +$
$107\,436\ a1\ a2\ a3^5\ a6 + 50\,589\ a2^2\ a3^5\ a6 + 11\,382\ a1\ a3^6\ a6 + 11\,382\ a2\ a3^6\ a6 + 864\ a3^7\ a6 +$
$11\,382\ a1^6\ a4\ a6 + 107\,436\ a1^5\ a2\ a4\ a6 + 347\,841\ a1^4\ a2^2\ a4\ a6 + 504\,482\ a1^3\ a2^3\ a4\ a6 +$
$347\,841\ a1^2\ a2^4\ a4\ a6 + 107\,436\ a1\ a2^5\ a4\ a6 + 11\,382\ a2^6\ a4\ a6 + 107\,436\ a1^5\ a3\ a4\ a6 +$
$736\,479\ a1^4\ a2\ a3\ a4\ a6 + 1\,715\,511\ a1^3\ a2^2\ a3\ a4\ a6 + 1\,715\,511\ a1^2\ a2^3\ a3\ a4\ a6 +$
$736\,479\ a1\ a2^4\ a3\ a4\ a6 + 107\,436\ a2^5\ a3\ a4\ a6 + 347\,841\ a1^4\ a3^2\ a4\ a6 +$
$1\,715\,511\ a1^3\ a2\ a3^2\ a4\ a6 + 2\,755\,215\ a1^2\ a2^2\ a3^2\ a4\ a6 + 1\,715\,511\ a1\ a2^3\ a3^2\ a4\ a6 +$
$347\,841\ a2^4\ a3^2\ a4\ a6 + 504\,482\ a1^3\ a3^3\ a4\ a6 + 1\,715\,511\ a1^2\ a2\ a3^3\ a4\ a6 +$
$1\,715\,511\ a1\ a2^2\ a3^3\ a4\ a6 + 504\,482\ a2^3\ a3^3\ a4\ a6 + 347\,841\ a1^2\ a3^4\ a4\ a6 +$
$736\,479\ a1\ a2\ a3^4\ a4\ a6 + 347\,841\ a2^2\ a3^4\ a4\ a6 + 107\,436\ a1\ a3^5\ a4\ a6 + 107\,436\ a2\ a3^5\ a4\ a6 +$
$11\,382\ a3^6\ a4\ a6 + 50\,589\ a1^5\ a4^2\ a6 + 347\,841\ a1^4\ a2\ a4^2\ a6 + 811\,344\ a1^3\ a2^2\ a4^2\ a6 +$
$811\,344\ a1^2\ a2^3\ a4^2\ a6 + 347\,841\ a1\ a2^4\ a4^2\ a6 + 50\,589\ a2^5\ a4^2\ a6 + 347\,841\ a1^4\ a3\ a4^2\ a6 +$
$1\,715\,511\ a1^3\ a2\ a3\ a4^2\ a6 + 2\,755\,215\ a1^2\ a2^2\ a3\ a4^2\ a6 + 1\,715\,511\ a1\ a2^3\ a3\ a4^2\ a6 +$
$347\,841\ a2^4\ a3\ a4^2\ a6 + 811\,344\ a1^3\ a3^2\ a4^2\ a6 + 2\,755\,215\ a1^2\ a2\ a3^2\ a4^2\ a6 +$
$2\,755\,215\ a1\ a2^2\ a3^2\ a4^2\ a6 + 811\,344\ a2^3\ a3^2\ a4^2\ a6 + 811\,344\ a1^2\ a3^3\ a4^2\ a6 +$
$1\,715\,511\ a1\ a2\ a3^3\ a4^2\ a6 + 811\,344\ a2^2\ a3^3\ a4^2\ a6 + 347\,841\ a1\ a3^4\ a4^2\ a6 +$
$347\,841\ a2\ a3^4\ a4^2\ a6 + 50\,589\ a3^5\ a4^2\ a6 + 101\,835\ a1^4\ a4^3\ a6 + 504\,482\ a1^3\ a2\ a4^3\ a6 +$
$811\,344\ a1^2\ a2^2\ a4^3\ a6 + 504\,482\ a1\ a2^3\ a4^3\ a6 + 101\,835\ a2^4\ a4^3\ a6 + 504\,482\ a1^3\ a3\ a4^3\ a6 +$
$1\,715\,511\ a1^2\ a2\ a3\ a4^3\ a6 + 1\,715\,511\ a1\ a2^2\ a3\ a4^3\ a6 + 504\,482\ a2^3\ a3\ a4^3\ a6 +$
$811\,344\ a1^2\ a3^2\ a4^3\ a6 + 1\,715\,511\ a1\ a2\ a3^2\ a4^3\ a6 + 811\,344\ a2^2\ a3^2\ a4^3\ a6 +$
$504\,482\ a1\ a3^3\ a4^3\ a6 + 504\,482\ a2\ a3^3\ a4^3\ a6 + 101\,835\ a3^4\ a4^3\ a6 + 101\,835\ a1^3\ a4^4\ a6 +$
$347\,841\ a1^2\ a2\ a4^4\ a6 + 347\,841\ a1\ a2^2\ a4^4\ a6 + 101\,835\ a2^3\ a4^4\ a6 + 347\,841\ a1^2\ a3\ a4^4\ a6 +$
$736\,479\ a1\ a2\ a3\ a4^4\ a6 + 347\,841\ a2^2\ a3\ a4^4\ a6 + 347\,841\ a1\ a3^2\ a4^4\ a6 +$
$347\,841\ a2\ a3^2\ a4^4\ a6 + 101\,835\ a3^3\ a4^4\ a6 + 50\,589\ a1^2\ a4^5\ a6 + 107\,436\ a1\ a2\ a4^5\ a6 +$
$50\,589\ a2^2\ a4^5\ a6 + 107\,436\ a1\ a3\ a4^5\ a6 + 107\,436\ a2\ a3\ a4^5\ a6 + 50\,589\ a3^2\ a4^5\ a6 +$
$11\,382\ a1\ a4^6\ a6 + 11\,382\ a2\ a4^6\ a6 + 11\,382\ a3\ a4^6\ a6 + 864\ a4^7\ a6 + 11\,382\ a1^6\ a5\ a6 +$

$107\,436\ a1^5\ a2\ a5\ a6 + 347\,841\ a1^4\ a2^2\ a5\ a6 + 504\,482\ a1^3\ a2^3\ a5\ a6 + 347\,841\ a1^2\ a2^4\ a5\ a6 +$
$107\,436\ a1\ a2^5\ a5\ a6 + 11\,382\ a2^6\ a5\ a6 + 107\,436\ a1^5\ a3\ a5\ a6 + 736\,479\ a1^4\ a2\ a3\ a5\ a6 +$
$1\,715\,511\ a1^3\ a2^2\ a3\ a5\ a6 + 1\,715\,511\ a1^2\ a2^3\ a3\ a5\ a6 + 736\,479\ a1\ a2^4\ a3\ a5\ a6 +$
$107\,436\ a2^5\ a3\ a5\ a6 + 347\,841\ a1^4\ a3^2\ a5\ a6 + 1\,715\,511\ a1^3\ a2\ a3^2\ a5\ a6 +$
$2\,755\,215\ a1^2\ a2^2\ a3^2\ a5\ a6 + 1\,715\,511\ a1\ a2^3\ a3^2\ a5\ a6 + 347\,841\ a2^4\ a3^2\ a5\ a6 +$
$504\,482\ a1^3\ a3^3\ a5\ a6 + 1\,715\,511\ a1^2\ a2\ a3^3\ a5\ a6 + 1\,715\,511\ a1\ a2^2\ a3^3\ a5\ a6 +$
$504\,482\ a2^3\ a3^3\ a5\ a6 + 347\,841\ a1^2\ a3^4\ a5\ a6 + 736\,479\ a1\ a2\ a3^4\ a5\ a6 +$
$347\,841\ a2^2\ a3^4\ a5\ a6 + 107\,436\ a1\ a3^5\ a5\ a6 + 107\,436\ a2\ a3^5\ a5\ a6 + 11\,382\ a3^6\ a5\ a6 +$
$107\,436\ a1^5\ a4\ a5\ a6 + 736\,479\ a1^4\ a2\ a4\ a5\ a6 + 1\,715\,511\ a1^3\ a2^2\ a4\ a5\ a6 +$
$1\,715\,511\ a1^2\ a2^3\ a4\ a5\ a6 + 736\,479\ a1\ a2^4\ a4\ a5\ a6 + 107\,436\ a2^5\ a4\ a5\ a6 +$
$736\,479\ a1^4\ a3\ a4\ a5\ a6 + 3\,627\,000\ a1^3\ a2\ a3\ a4\ a5\ a6 + 5\,822\,622\ a1^2\ a2^2\ a3\ a4\ a5\ a6 +$
$3\,627\,000\ a1\ a2^3\ a3\ a4\ a5\ a6 + 736\,479\ a2^4\ a3\ a4\ a5\ a6 + 1\,715\,511\ a1^3\ a3^2\ a4\ a5\ a6 +$
$5\,822\,622\ a1^2\ a2\ a3^2\ a4\ a5\ a6 + 5\,822\,622\ a1\ a2^2\ a3^2\ a4\ a5\ a6 + 1\,715\,511\ a2^3\ a3^2\ a4\ a5\ a6 +$
$1\,715\,511\ a1^2\ a3^3\ a4\ a5\ a6 + 3\,627\,000\ a1\ a2\ a3^3\ a4\ a5\ a6 + 1\,715\,511\ a2^2\ a3^3\ a4\ a5\ a6 +$
$736\,479\ a1\ a3^4\ a4\ a5\ a6 + 736\,479\ a2\ a3^4\ a4\ a5\ a6 + 107\,436\ a3^5\ a4\ a5\ a6 +$
$347\,841\ a1^4\ a4^2\ a5\ a6 + 1\,715\,511\ a1^3\ a2\ a4^2\ a5\ a6 + 2\,755\,215\ a1^2\ a2^2\ a4^2\ a5\ a6 +$
$1\,715\,511\ a1\ a2^3\ a4^2\ a5\ a6 + 347\,841\ a2^4\ a4^2\ a5\ a6 + 1\,715\,511\ a1^3\ a3\ a4^2\ a5\ a6 +$
$5\,822\,622\ a1^2\ a2\ a3\ a4^2\ a5\ a6 + 5\,822\,622\ a1\ a2^2\ a3\ a4^2\ a5\ a6 + 1\,715\,511\ a2^3\ a3\ a4^2\ a5\ a6 +$
$2\,755\,215\ a1^2\ a3^2\ a4^2\ a5\ a6 + 5\,822\,622\ a1\ a2\ a3^2\ a4^2\ a5\ a6 + 2\,755\,215\ a2^2\ a3^2\ a4^2\ a5\ a6 +$
$1\,715\,511\ a1\ a3^3\ a4^2\ a5\ a6 + 1\,715\,511\ a2\ a3^3\ a4^2\ a5\ a6 + 347\,841\ a3^4\ a4^2\ a5\ a6 +$
$504\,482\ a1^3\ a4^3\ a5\ a6 + 1\,715\,511\ a1^2\ a2\ a4^3\ a5\ a6 + 1\,715\,511\ a1\ a2^2\ a4^3\ a5\ a6 +$
$504\,482\ a2^3\ a4^3\ a5\ a6 + 1\,715\,511\ a1^2\ a3\ a4^3\ a5\ a6 + 3\,627\,000\ a1\ a2\ a3\ a4^3\ a5\ a6 +$
$1\,715\,511\ a2^2\ a3\ a4^3\ a5\ a6 + 1\,715\,511\ a1\ a3^2\ a4^3\ a5\ a6 + 1\,715\,511\ a2\ a3^2\ a4^3\ a5\ a6 +$
$504\,482\ a3^3\ a4^3\ a5\ a6 + 347\,841\ a1^2\ a4^4\ a5\ a6 + 736\,479\ a1\ a2\ a4^4\ a5\ a6 +$
$347\,841\ a2^2\ a4^4\ a5\ a6 + 736\,479\ a1\ a3\ a4^4\ a5\ a6 + 736\,479\ a2\ a3\ a4^4\ a5\ a6 +$
$347\,841\ a3^2\ a4^4\ a5\ a6 + 107\,436\ a1\ a4^5\ a5\ a6 + 107\,436\ a2\ a4^5\ a5\ a6 +$
$107\,436\ a3\ a4^5\ a5\ a6 + 11\,382\ a4^6\ a5\ a6 + 50\,589\ a1^5\ a5^2\ a6 + 347\,841\ a1^4\ a2\ a5^2\ a6 +$
$811\,344\ a1^3\ a2^2\ a5^2\ a6 + 811\,344\ a1^2\ a2^3\ a5^2\ a6 + 347\,841\ a1\ a2^4\ a5^2\ a6 +$
$50\,589\ a2^5\ a5^2\ a6 + 347\,841\ a1^4\ a3\ a5^2\ a6 + 1\,715\,511\ a1^3\ a2\ a3\ a5^2\ a6 +$
$2\,755\,215\ a1^2\ a2^2\ a3\ a5^2\ a6 + 1\,715\,511\ a1\ a2^3\ a3\ a5^2\ a6 + 347\,841\ a2^4\ a3\ a5^2\ a6 +$
$811\,344\ a1^3\ a3^2\ a5^2\ a6 + 2\,755\,215\ a1^2\ a2\ a3^2\ a5^2\ a6 + 2\,755\,215\ a1\ a2^2\ a3^2\ a5^2\ a6 +$
$811\,344\ a2^3\ a3^2\ a5^2\ a6 + 811\,344\ a1^2\ a3^3\ a5^2\ a6 + 1\,715\,511\ a1\ a2\ a3^3\ a5^2\ a6 +$
$811\,344\ a2^2\ a3^3\ a5^2\ a6 + 347\,841\ a1\ a3^4\ a5^2\ a6 + 347\,841\ a2\ a3^4\ a5^2\ a6 + 50\,589\ a3^5\ a5^2\ a6 +$
$347\,841\ a1^4\ a4\ a5^2\ a6 + 1\,715\,511\ a1^3\ a2\ a4\ a5^2\ a6 + 2\,755\,215\ a1^2\ a2^2\ a4\ a5^2\ a6 +$
$1\,715\,511\ a1\ a2^3\ a4\ a5^2\ a6 + 347\,841\ a2^4\ a4\ a5^2\ a6 + 1\,715\,511\ a1^3\ a3\ a4\ a5^2\ a6 +$
$5\,822\,622\ a1^2\ a2\ a3\ a4\ a5^2\ a6 + 5\,822\,622\ a1\ a2^2\ a3\ a4\ a5^2\ a6 + 1\,715\,511\ a2^3\ a3\ a4\ a5^2\ a6 +$
$2\,755\,215\ a1^2\ a3^2\ a4\ a5^2\ a6 + 5\,822\,622\ a1\ a2\ a3^2\ a4\ a5^2\ a6 + 2\,755\,215\ a2^2\ a3^2\ a4\ a5^2\ a6 +$
$1\,715\,511\ a1\ a3^3\ a4\ a5^2\ a6 + 1\,715\,511\ a2\ a3^3\ a4\ a5^2\ a6 + 347\,841\ a3^4\ a4\ a5^2\ a6 +$
$811\,344\ a1^3\ a4^2\ a5^2\ a6 + 2\,755\,215\ a1^2\ a2\ a4^2\ a5^2\ a6 + 2\,755\,215\ a1\ a2^2\ a4^2\ a5^2\ a6 +$
$811\,344\ a2^3\ a4^2\ a5^2\ a6 + 2\,755\,215\ a1^2\ a3\ a4^2\ a5^2\ a6 + 5\,822\,622\ a1\ a2\ a3\ a4^2\ a5^2\ a6 +$
$2\,755\,215\ a2^2\ a3\ a4^2\ a5^2\ a6 + 2\,755\,215\ a1\ a3^2\ a4^2\ a5^2\ a6 + 2\,755\,215\ a2\ a3^2\ a4^2\ a5^2\ a6 +$
$811\,344\ a3^3\ a4^2\ a5^2\ a6 + 811\,344\ a1^2\ a4^3\ a5^2\ a6 + 1\,715\,511\ a1\ a2\ a4^3\ a5^2\ a6 +$
$811\,344\ a2^2\ a4^3\ a5^2\ a6 + 1\,715\,511\ a1\ a3\ a4^3\ a5^2\ a6 + 1\,715\,511\ a2\ a3\ a4^3\ a5^2\ a6 +$
$811\,344\ a3^2\ a4^3\ a5^2\ a6 + 347\,841\ a1\ a4^4\ a5^2\ a6 + 347\,841\ a2\ a4^4\ a5^2\ a6 +$
$347\,841\ a3\ a4^4\ a5^2\ a6 + 50\,589\ a4^5\ a5^2\ a6 + 101\,835\ a1^4\ a5^3\ a6 + 504\,482\ a1^3\ a2\ a5^3\ a6 +$
$811\,344\ a1^2\ a2^2\ a5^3\ a6 + 504\,482\ a1\ a2^3\ a5^3\ a6 + 101\,835\ a2^4\ a5^3\ a6 + 504\,482\ a1^3\ a3\ a5^3\ a6 +$
$1\,715\,511\ a1^2\ a2\ a3\ a5^3\ a6 + 1\,715\,511\ a1\ a2^2\ a3\ a5^3\ a6 + 504\,482\ a2^3\ a3\ a5^3\ a6 +$

$811344\, a1^2\, a3^2\, a5^3\, a6 + 1715511\, a1\, a2\, a3^2\, a5^3\, a6 + 811344\, a2^2\, a3^2\, a5^3\, a6 +$
$504482\, a1\, a3^3\, a5^3\, a6 + 504482\, a2\, a3^3\, a5^3\, a6 + 101835\, a3^4\, a5^3\, a6 + 504482\, a1^3\, a4\, a5^3\, a6 +$
$1715511\, a1^2\, a2\, a4\, a5^3\, a6 + 1715511\, a1\, a2^2\, a4\, a5^3\, a6 + 504482\, a2^3\, a4\, a5^3\, a6 +$
$1715511\, a1^2\, a3\, a4\, a5^3\, a6 + 3627000\, a1\, a2\, a3\, a4\, a5^3\, a6 + 1715511\, a2^2\, a3\, a4\, a5^3\, a6 +$
$1715511\, a1\, a3^2\, a4\, a5^3\, a6 + 1715511\, a2\, a3^2\, a4\, a5^3\, a6 + 504482\, a3^3\, a4\, a5^3\, a6 +$
$811344\, a1^2\, a4^2\, a5^3\, a6 + 1715511\, a1\, a2\, a4^2\, a5^3\, a6 + 811344\, a2^2\, a4^2\, a5^3\, a6 +$
$1715511\, a1\, a3\, a4^2\, a5^3\, a6 + 1715511\, a2\, a3\, a4^2\, a5^3\, a6 + 811344\, a3^2\, a4^2\, a5^3\, a6 +$
$504482\, a1\, a4^3\, a5^3\, a6 + 504482\, a2\, a4^3\, a5^3\, a6 + 504482\, a3\, a4^3\, a5^3\, a6 + 101835\, a4^4\, a5^3\, a6 +$
$101835\, a1^3\, a5^4\, a6 + 347841\, a1^2\, a2\, a5^4\, a6 + 347841\, a1\, a2^2\, a5^4\, a6 + 101835\, a2^3\, a5^4\, a6 +$
$347841\, a1^2\, a3\, a5^4\, a6 + 736479\, a1\, a2\, a3\, a5^4\, a6 + 347841\, a2^2\, a3\, a5^4\, a6 +$
$347841\, a1\, a3^2\, a5^4\, a6 + 347841\, a2\, a3^2\, a5^4\, a6 + 101835\, a3^3\, a5^4\, a6 + 347841\, a1^2\, a4\, a5^4\, a6 +$
$736479\, a1\, a2\, a4\, a5^4\, a6 + 347841\, a2^2\, a4\, a5^4\, a6 + 736479\, a1\, a3\, a4\, a5^4\, a6 +$
$736479\, a2\, a3\, a4\, a5^4\, a6 + 347841\, a3^2\, a4\, a5^4\, a6 + 347841\, a1\, a4^2\, a5^4\, a6 +$
$347841\, a2\, a4^2\, a5^4\, a6 + 347841\, a3\, a4^2\, a5^4\, a6 + 101835\, a4^3\, a5^4\, a6 + 50589\, a1^2\, a5^5\, a6 +$
$107436\, a1\, a2\, a5^5\, a6 + 50589\, a2^2\, a5^5\, a6 + 107436\, a1\, a3\, a5^5\, a6 + 107436\, a2\, a3\, a5^5\, a6 +$
$50589\, a3^2\, a5^5\, a6 + 107436\, a1\, a4\, a5^5\, a6 + 107436\, a2\, a4\, a5^5\, a6 + 107436\, a3\, a4\, a5^5\, a6 +$
$50589\, a4^2\, a5^5\, a6 + 11382\, a1\, a5^6\, a6 + 11382\, a2\, a5^6\, a6 + 11382\, a3\, a5^6\, a6 +$
$11382\, a4\, a5^6\, a6 + 864\, a5^7\, a6 + 5334\, a1^6\, a6^2 + 50589\, a1^5\, a2\, a6^2 + 164205\, a1^4\, a2^2\, a6^2 +$
$238338\, a1^3\, a2^3\, a6^2 + 164205\, a1^2\, a2^4\, a6^2 + 50589\, a1\, a2^5\, a6^2 + 5334\, a2^6\, a6^2 +$
$50589\, a1^5\, a3\, a6^2 + 347841\, a1^4\, a2\, a3\, a6^2 + 811344\, a1^3\, a2^2\, a3\, a6^2 + 811344\, a1^2\, a2^3\, a3\, a6^2 +$
$347841\, a1\, a2^4\, a3\, a6^2 + 50589\, a2^5\, a3\, a6^2 + 164205\, a1^4\, a3^2\, a6^2 + 811344\, a1^3\, a2\, a3^2\, a6^2 +$
$1303803\, a1^2\, a2^2\, a3^2\, a6^2 + 811344\, a1\, a2^3\, a3^2\, a6^2 + 164205\, a2^4\, a3^2\, a6^2 +$
$238338\, a1^3\, a3^3\, a6^2 + 811344\, a1^2\, a2\, a3^3\, a6^2 + 811344\, a1\, a2^2\, a3^3\, a6^2 + 238338\, a2^3\, a3^3\, a6^2 +$
$164205\, a1^2\, a3^4\, a6^2 + 347841\, a1\, a2\, a3^4\, a6^2 + 164205\, a2^2\, a3^4\, a6^2 + 50589\, a1\, a3^5\, a6^2 +$
$50589\, a2\, a3^5\, a6^2 + 5334\, a3^6\, a6^2 + 50589\, a1^5\, a4\, a6^2 + 347841\, a1^4\, a2\, a4\, a6^2 +$
$811344\, a1^3\, a2^2\, a4\, a6^2 + 811344\, a1^2\, a2^3\, a4\, a6^2 + 347841\, a1\, a2^4\, a4\, a6^2 + 50589\, a2^5\, a4\, a6^2 +$
$347841\, a1^4\, a3\, a4\, a6^2 + 1715511\, a1^3\, a2\, a3\, a4\, a6^2 + 2755215\, a1^2\, a2^2\, a3\, a4\, a6^2 +$
$1715511\, a1\, a2^3\, a3\, a4\, a6^2 + 347841\, a2^4\, a3\, a4\, a6^2 + 811344\, a1^3\, a3^2\, a4\, a6^2 +$
$2755215\, a1^2\, a2\, a3^2\, a4\, a6^2 + 2755215\, a1\, a2^2\, a3^2\, a4\, a6^2 + 811344\, a2^3\, a3^2\, a4\, a6^2 +$
$811344\, a1^2\, a3^3\, a4\, a6^2 + 1715511\, a1\, a2\, a3^3\, a4\, a6^2 + 811344\, a2^2\, a3^3\, a4\, a6^2 +$
$347841\, a1\, a3^4\, a4\, a6^2 + 347841\, a2\, a3^4\, a4\, a6^2 + 50589\, a3^5\, a4\, a6^2 + 164205\, a1^4\, a4^2\, a6^2 +$
$811344\, a1^3\, a2\, a4^2\, a6^2 + 1303803\, a1^2\, a2^2\, a4^2\, a6^2 + 811344\, a1\, a2^3\, a4^2\, a6^2 +$
$164205\, a2^4\, a4^2\, a6^2 + 811344\, a1^3\, a3\, a4^2\, a6^2 + 2755215\, a1^2\, a2\, a3\, a4^2\, a6^2 +$
$2755215\, a1\, a2^2\, a3\, a4^2\, a6^2 + 811344\, a2^3\, a3\, a4^2\, a6^2 + 1303803\, a1^2\, a3^2\, a4^2\, a6^2 +$
$2755215\, a1\, a2\, a3^2\, a4^2\, a6^2 + 1303803\, a2^2\, a3^2\, a4^2\, a6^2 + 811344\, a1\, a3^3\, a4^2\, a6^2 +$
$811344\, a2\, a3^3\, a4^2\, a6^2 + 164205\, a3^4\, a4^2\, a6^2 + 238338\, a1^3\, a4^3\, a6^2 +$
$811344\, a1^2\, a2\, a4^3\, a6^2 + 811344\, a1\, a2^2\, a4^3\, a6^2 + 238338\, a2^3\, a4^3\, a6^2 +$
$811344\, a1^2\, a3\, a4^3\, a6^2 + 1715511\, a1\, a2\, a3\, a4^3\, a6^2 + 811344\, a2^2\, a3\, a4^3\, a6^2 +$
$811344\, a1\, a3^2\, a4^3\, a6^2 + 811344\, a2\, a3^2\, a4^3\, a6^2 + 238338\, a3^3\, a4^3\, a6^2 +$
$164205\, a1^2\, a4^4\, a6^2 + 347841\, a1\, a2\, a4^4\, a6^2 + 164205\, a2^2\, a4^4\, a6^2 + 347841\, a1\, a3\, a4^4\, a6^2 +$
$347841\, a2\, a3\, a4^4\, a6^2 + 164205\, a3^2\, a4^4\, a6^2 + 50589\, a1\, a4^5\, a6^2 + 50589\, a2\, a4^5\, a6^2 +$
$50589\, a3\, a4^5\, a6^2 + 5334\, a4^6\, a6^2 + 50589\, a1^5\, a5\, a6^2 + 347841\, a1^4\, a2\, a5\, a6^2 +$
$811344\, a1^3\, a2^2\, a5\, a6^2 + 811344\, a1^2\, a2^3\, a5\, a6^2 + 347841\, a1\, a2^4\, a5\, a6^2 +$
$50589\, a2^5\, a5\, a6^2 + 347841\, a1^4\, a3\, a5\, a6^2 + 1715511\, a1^3\, a2\, a3\, a5\, a6^2 +$
$2755215\, a1^2\, a2^2\, a3\, a5\, a6^2 + 1715511\, a1\, a2^3\, a3\, a5\, a6^2 + 347841\, a2^4\, a3\, a5\, a6^2 +$
$811344\, a1^3\, a3^2\, a5\, a6^2 + 2755215\, a1^2\, a2\, a3^2\, a5\, a6^2 + 2755215\, a1\, a2^2\, a3^2\, a5\, a6^2 +$
$811344\, a2^3\, a3^2\, a5\, a6^2 + 811344\, a1^2\, a3^3\, a5\, a6^2 + 1715511\, a1\, a2\, a3^3\, a5\, a6^2 +$

$811344\, a2^2\, a3^3\, a5\, a6^2 + 347841\, a1\, a3^4\, a5\, a6^2 + 347841\, a2\, a3^4\, a5\, a6^2 + 50589\, a3^5\, a5\, a6^2 +$
$347841\, a1^4\, a4\, a5\, a6^2 + 1715511\, a1^3\, a2\, a4\, a5\, a6^2 + 2755215\, a1^2\, a2^2\, a4\, a5\, a6^2 +$
$1715511\, a1\, a2^3\, a4\, a5\, a6^2 + 347841\, a2^4\, a4\, a5\, a6^2 + 1715511\, a1^3\, a3\, a4\, a5\, a6^2 +$
$5822622\, a1^2\, a2\, a3\, a4\, a5\, a6^2 + 5822622\, a1\, a2^2\, a3\, a4\, a5\, a6^2 + 1715511\, a2^3\, a3\, a4\, a5\, a6^2 +$
$2755215\, a1^2\, a3^2\, a4\, a5\, a6^2 + 5822622\, a1\, a2\, a3^2\, a4\, a5\, a6^2 + 2755215\, a2^2\, a3^2\, a4\, a5\, a6^2 +$
$1715511\, a1\, a3^3\, a4\, a5\, a6^2 + 1715511\, a2\, a3^3\, a4\, a5\, a6^2 + 347841\, a3^4\, a4\, a5\, a6^2 +$
$811344\, a1^3\, a4^2\, a5\, a6^2 + 2755215\, a1^2\, a2\, a4^2\, a5\, a6^2 + 2755215\, a1\, a2^2\, a4^2\, a5\, a6^2 +$
$811344\, a2^3\, a4^2\, a5\, a6^2 + 2755215\, a1^2\, a3\, a4^2\, a5\, a6^2 + 5822622\, a1\, a2\, a3\, a4^2\, a5\, a6^2 +$
$2755215\, a2^2\, a3\, a4^2\, a5\, a6^2 + 2755215\, a1\, a3^2\, a4^2\, a5\, a6^2 + 2755215\, a2\, a3^2\, a4^2\, a5\, a6^2 +$
$811344\, a3^3\, a4^2\, a5\, a6^2 + 811344\, a1^2\, a4^3\, a5\, a6^2 + 1715511\, a1\, a2\, a4^3\, a5\, a6^2 +$
$811344\, a2^2\, a4^3\, a5\, a6^2 + 1715511\, a1\, a3\, a4^3\, a5\, a6^2 + 1715511\, a2\, a3\, a4^3\, a5\, a6^2 +$
$811344\, a3^2\, a4^3\, a5\, a6^2 + 347841\, a1\, a4^4\, a5\, a6^2 + 347841\, a2\, a4^4\, a5\, a6^2 +$
$347841\, a3\, a4^4\, a5\, a6^2 + 50589\, a4^5\, a5\, a6^2 + 164205\, a1^4\, a5^2\, a6^2 + 811344\, a1^3\, a2\, a5^2\, a6^2 +$
$1303803\, a1^2\, a2^2\, a5^2\, a6^2 + 811344\, a1\, a2^3\, a5^2\, a6^2 + 164205\, a2^4\, a5^2\, a6^2 +$
$811344\, a1^3\, a3\, a5^2\, a6^2 + 2755215\, a1^2\, a2\, a3\, a5^2\, a6^2 + 2755215\, a1\, a2^2\, a3\, a5^2\, a6^2 +$
$811344\, a2^3\, a3\, a5^2\, a6^2 + 1303803\, a1^2\, a3^2\, a5^2\, a6^2 + 2755215\, a1\, a2\, a3^2\, a5^2\, a6^2 +$
$1303803\, a2^2\, a3^2\, a5^2\, a6^2 + 811344\, a1\, a3^3\, a5^2\, a6^2 + 811344\, a2\, a3^3\, a5^2\, a6^2 +$
$164205\, a3^4\, a5^2\, a6^2 + 811344\, a1^3\, a4\, a5^2\, a6^2 + 2755215\, a1^2\, a2\, a4\, a5^2\, a6^2 +$
$2755215\, a1\, a2^2\, a4\, a5^2\, a6^2 + 811344\, a2^3\, a4\, a5^2\, a6^2 + 2755215\, a1^2\, a3\, a4\, a5^2\, a6^2 +$
$5822622\, a1\, a2\, a3\, a4\, a5^2\, a6^2 + 2755215\, a2^2\, a3\, a4\, a5^2\, a6^2 + 2755215\, a1\, a3^2\, a4\, a5^2\, a6^2 +$
$2755215\, a2\, a3^2\, a4\, a5^2\, a6^2 + 811344\, a3^3\, a4\, a5^2\, a6^2 + 1303803\, a1^2\, a4^2\, a5^2\, a6^2 +$
$2755215\, a1\, a2\, a4^2\, a5^2\, a6^2 + 1303803\, a2^2\, a4^2\, a5^2\, a6^2 + 2755215\, a1\, a3\, a4^2\, a5^2\, a6^2 +$
$2755215\, a2\, a3\, a4^2\, a5^2\, a6^2 + 1303803\, a3^2\, a4^2\, a5^2\, a6^2 + 811344\, a1\, a4^3\, a5^2\, a6^2 +$
$811344\, a2\, a4^3\, a5^2\, a6^2 + 811344\, a3\, a4^3\, a5^2\, a6^2 + 164205\, a4^4\, a5^2\, a6^2 + 238338\, a1^3\, a5^3\, a6^2 +$
$811344\, a1^2\, a2\, a5^3\, a6^2 + 811344\, a1\, a2^2\, a5^3\, a6^2 + 238338\, a2^3\, a5^3\, a6^2 +$
$811344\, a1^2\, a3\, a5^3\, a6^2 + 1715511\, a1\, a2\, a3\, a5^3\, a6^2 + 811344\, a2^2\, a3\, a5^3\, a6^2 +$
$811344\, a1\, a3^2\, a5^3\, a6^2 + 811344\, a2\, a3^2\, a5^3\, a6^2 + 238338\, a3^3\, a5^3\, a6^2 +$
$811344\, a1^2\, a4\, a5^3\, a6^2 + 1715511\, a1\, a2\, a4\, a5^3\, a6^2 + 811344\, a2^2\, a4\, a5^3\, a6^2 +$
$1715511\, a1\, a3\, a4\, a5^3\, a6^2 + 1715511\, a2\, a3\, a4\, a5^3\, a6^2 + 811344\, a3^2\, a4\, a5^3\, a6^2 +$
$811344\, a1\, a4^2\, a5^3\, a6^2 + 811344\, a2\, a4^2\, a5^3\, a6^2 + 811344\, a3\, a4^2\, a5^3\, a6^2 +$
$238338\, a4^3\, a5^3\, a6^2 + 164205\, a1^2\, a5^4\, a6^2 + 347841\, a1\, a2\, a5^4\, a6^2 + 164205\, a2^2\, a5^4\, a6^2 +$
$347841\, a1\, a3\, a5^4\, a6^2 + 347841\, a2\, a3\, a5^4\, a6^2 + 164205\, a3^2\, a5^4\, a6^2 + 347841\, a1\, a4\, a5^4\, a6^2 +$
$347841\, a2\, a4\, a5^4\, a6^2 + 347841\, a3\, a4\, a5^4\, a6^2 + 164205\, a4^2\, a5^4\, a6^2 + 50589\, a1\, a5^5\, a6^2 +$
$50589\, a2\, a5^5\, a6^2 + 50589\, a3\, a5^5\, a6^2 + 50589\, a4\, a5^5\, a6^2 + 5334\, a5^6\, a6^2 +$
$14700\, a1^5\, a6^3 + 101835\, a1^4\, a2\, a6^3 + 238338\, a1^3\, a2^2\, a6^3 + 238338\, a1^2\, a2^3\, a6^3 +$
$101835\, a1\, a2^4\, a6^3 + 14700\, a2^5\, a6^3 + 101835\, a1^4\, a3\, a6^3 + 504482\, a1^3\, a2\, a3\, a6^3 +$
$811344\, a1^2\, a2^2\, a3\, a6^3 + 504482\, a1\, a2^3\, a3\, a6^3 + 101835\, a2^4\, a3\, a6^3 + 238338\, a1^3\, a3^2\, a6^3 +$
$811344\, a1^2\, a2\, a3^2\, a6^3 + 811344\, a1\, a2^2\, a3^2\, a6^3 + 238338\, a2^3\, a3^2\, a6^3 +$
$238338\, a1^2\, a3^3\, a6^3 + 504482\, a1\, a2\, a3^3\, a6^3 + 238338\, a2^2\, a3^3\, a6^3 + 101835\, a1\, a3^4\, a6^3 +$
$101835\, a2\, a3^4\, a6^3 + 14700\, a3^5\, a6^3 + 101835\, a1^4\, a4\, a6^3 + 504482\, a1^3\, a2\, a4\, a6^3 +$
$811344\, a1^2\, a2^2\, a4\, a6^3 + 504482\, a1\, a2^3\, a4\, a6^3 + 101835\, a2^4\, a4\, a6^3 + 504482\, a1^3\, a3\, a4\, a6^3 +$
$1715511\, a1^2\, a2\, a3\, a4\, a6^3 + 1715511\, a1\, a2^2\, a3\, a4\, a6^3 + 504482\, a2^3\, a3\, a4\, a6^3 +$
$811344\, a1^2\, a3^2\, a4\, a6^3 + 1715511\, a1\, a2\, a3^2\, a4\, a6^3 + 811344\, a2^2\, a3^2\, a4\, a6^3 +$
$504482\, a1\, a3^3\, a4\, a6^3 + 504482\, a2\, a3^3\, a4\, a6^3 + 101835\, a3^4\, a4\, a6^3 + 238338\, a1^3\, a4^2\, a6^3 +$
$811344\, a1^2\, a2\, a4^2\, a6^3 + 811344\, a1\, a2^2\, a4^2\, a6^3 + 238338\, a2^3\, a4^2\, a6^3 +$
$811344\, a1^2\, a3\, a4^2\, a6^3 + 1715511\, a1\, a2\, a3\, a4^2\, a6^3 + 811344\, a2^2\, a3\, a4^2\, a6^3 +$
$811344\, a1\, a3^2\, a4^2\, a6^3 + 811344\, a2\, a3^2\, a4^2\, a6^3 + 238338\, a3^3\, a4^2\, a6^3 +$

$238\,338\ a1^2\ a4^3\ a6^3 + 504\,482\ a1\ a2\ a4^3\ a6^3 + 238\,338\ a2^2\ a4^3\ a6^3 + 504\,482\ a1\ a3\ a4^3\ a6^3 +$
$504\,482\ a2\ a3\ a4^3\ a6^3 + 238\,338\ a3^2\ a4^3\ a6^3 + 101\,835\ a1\ a4^4\ a6^3 + 101\,835\ a2\ a4^4\ a6^3 +$
$101\,835\ a3\ a4^4\ a6^3 + 14\,700\ a4^5\ a6^3 + 101\,835\ a1^4\ a5\ a6^3 + 504\,482\ a1^3\ a2\ a5\ a6^3 +$
$811\,344\ a1^2\ a2^2\ a5\ a6^3 + 504\,482\ a1\ a2^3\ a5\ a6^3 + 101\,835\ a2^4\ a5\ a6^3 + 504\,482\ a1^3\ a3\ a5\ a6^3 +$
$1\,715\,511\ a1^2\ a2\ a3\ a5\ a6^3 + 1\,715\,511\ a1\ a2^2\ a3\ a5\ a6^3 + 504\,482\ a2^3\ a3\ a5\ a6^3 +$
$811\,344\ a1^2\ a3^2\ a5\ a6^3 + 1\,715\,511\ a1\ a2\ a3^2\ a5\ a6^3 + 811\,344\ a2^2\ a3^2\ a5\ a6^3 +$
$504\,482\ a1\ a3^3\ a5\ a6^3 + 504\,482\ a2\ a3^3\ a5\ a6^3 + 101\,835\ a3^4\ a5\ a6^3 + 504\,482\ a1^3\ a4\ a5\ a6^3 +$
$1\,715\,511\ a1^2\ a2\ a4\ a5\ a6^3 + 1\,715\,511\ a1\ a2^2\ a4\ a5\ a6^3 + 504\,482\ a2^3\ a4\ a5\ a6^3 +$
$1\,715\,511\ a1^2\ a3\ a4\ a5\ a6^3 + 3\,627\,000\ a1\ a2\ a3\ a4\ a5\ a6^3 + 1\,715\,511\ a2^2\ a3\ a4\ a5\ a6^3 +$
$1\,715\,511\ a1\ a3^2\ a4\ a5\ a6^3 + 1\,715\,511\ a2\ a3^2\ a4\ a5\ a6^3 + 504\,482\ a3^3\ a4\ a5\ a6^3 +$
$811\,344\ a1^2\ a4^2\ a5\ a6^3 + 1\,715\,511\ a1\ a2\ a4^2\ a5\ a6^3 + 811\,344\ a2^2\ a4^2\ a5\ a6^3 +$
$1\,715\,511\ a1\ a3\ a4^2\ a5\ a6^3 + 1\,715\,511\ a2\ a3\ a4^2\ a5\ a6^3 + 811\,344\ a3^2\ a4^2\ a5\ a6^3 +$
$504\,482\ a1\ a4^3\ a5\ a6^3 + 504\,482\ a2\ a4^3\ a5\ a6^3 + 504\,482\ a3\ a4^3\ a5\ a6^3 + 101\,835\ a4^4\ a5\ a6^3 +$
$238\,338\ a1^3\ a5^2\ a6^3 + 811\,344\ a1^2\ a2\ a5^2\ a6^3 + 811\,344\ a1\ a2^2\ a5^2\ a6^3 + 238\,338\ a2^3\ a5^2\ a6^3 +$
$811\,344\ a1^2\ a3\ a5^2\ a6^3 + 1\,715\,511\ a1\ a2\ a3\ a5^2\ a6^3 + 811\,344\ a2^2\ a3\ a5^2\ a6^3 +$
$811\,344\ a1\ a3^2\ a5^2\ a6^3 + 811\,344\ a2\ a3^2\ a5^2\ a6^3 + 238\,338\ a3^3\ a5^2\ a6^3 +$
$811\,344\ a1^2\ a4\ a5^2\ a6^3 + 1\,715\,511\ a1\ a2\ a4\ a5^2\ a6^3 + 811\,344\ a2^2\ a4\ a5^2\ a6^3 +$
$1\,715\,511\ a1\ a3\ a4\ a5^2\ a6^3 + 1\,715\,511\ a2\ a3\ a4\ a5^2\ a6^3 + 811\,344\ a3^2\ a4\ a5^2\ a6^3 +$
$811\,344\ a1\ a4^2\ a5^2\ a6^3 + 811\,344\ a2\ a4^2\ a5^2\ a6^3 + 811\,344\ a3\ a4^2\ a5^2\ a6^3 +$
$238\,338\ a4^3\ a5^2\ a6^3 + 238\,338\ a1^2\ a5^3\ a6^3 + 504\,482\ a1\ a2\ a5^3\ a6^3 + 238\,338\ a2^2\ a5^3\ a6^3 +$
$504\,482\ a1\ a3\ a5^3\ a6^3 + 504\,482\ a2\ a3\ a5^3\ a6^3 + 238\,338\ a3^2\ a5^3\ a6^3 + 504\,482\ a1\ a4\ a5^3\ a6^3 +$
$504\,482\ a2\ a4\ a5^3\ a6^3 + 504\,482\ a3\ a4\ a5^3\ a6^3 + 238\,338\ a4^2\ a5^3\ a6^3 + 101\,835\ a1\ a5^4\ a6^3 +$
$101\,835\ a2\ a5^4\ a6^3 + 101\,835\ a3\ a5^4\ a6^3 + 101\,835\ a4\ a5^4\ a6^3 + 14\,700\ a5^5\ a6^3 +$
$20\,385\ a1^4\ a6^4 + 101\,835\ a1^3\ a2\ a6^4 + 164\,205\ a1^2\ a2^2\ a6^4 + 101\,835\ a1\ a2^3\ a6^4 +$
$20\,385\ a2^4\ a6^4 + 101\,835\ a1^3\ a3\ a6^4 + 347\,841\ a1^2\ a2\ a3\ a6^4 + 347\,841\ a1\ a2^2\ a3\ a6^4 +$
$101\,835\ a2^3\ a3\ a6^4 + 164\,205\ a1^2\ a3^2\ a6^4 + 347\,841\ a1\ a2\ a3^2\ a6^4 + 164\,205\ a2^2\ a3^2\ a6^4 +$
$101\,835\ a1\ a3^3\ a6^4 + 101\,835\ a2\ a3^3\ a6^4 + 20\,385\ a3^4\ a6^4 + 101\,835\ a1^3\ a4\ a6^4 +$
$347\,841\ a1^2\ a2\ a4\ a6^4 + 347\,841\ a1\ a2^2\ a4\ a6^4 + 101\,835\ a2^3\ a4\ a6^4 + 347\,841\ a1^2\ a3\ a4\ a6^4 +$
$736\,479\ a1\ a2\ a3\ a4\ a6^4 + 347\,841\ a2^2\ a3\ a4\ a6^4 + 347\,841\ a1\ a3^2\ a4\ a6^4 +$
$347\,841\ a2\ a3^2\ a4\ a6^4 + 101\,835\ a3^3\ a4\ a6^4 + 164\,205\ a1^2\ a4^2\ a6^4 + 347\,841\ a1\ a2\ a4^2\ a6^4 +$
$164\,205\ a2^2\ a4^2\ a6^4 + 347\,841\ a1\ a3\ a4^2\ a6^4 + 347\,841\ a2\ a3\ a4^2\ a6^4 + 164\,205\ a3^2\ a4^2\ a6^4 +$
$101\,835\ a1\ a4^3\ a6^4 + 101\,835\ a2\ a4^3\ a6^4 + 101\,835\ a3\ a4^3\ a6^4 + 20\,385\ a4^4\ a6^4 +$
$101\,835\ a1^3\ a5\ a6^4 + 347\,841\ a1^2\ a2\ a5\ a6^4 + 347\,841\ a1\ a2^2\ a5\ a6^4 + 101\,835\ a2^3\ a5\ a6^4 +$
$347\,841\ a1^2\ a3\ a5\ a6^4 + 736\,479\ a1\ a2\ a3\ a5\ a6^4 + 347\,841\ a2^2\ a3\ a5\ a6^4 +$
$347\,841\ a1\ a3^2\ a5\ a6^4 + 347\,841\ a2\ a3^2\ a5\ a6^4 + 101\,835\ a3^3\ a5\ a6^4 + 347\,841\ a1^2\ a4\ a5\ a6^4 +$
$736\,479\ a1\ a2\ a4\ a5\ a6^4 + 347\,841\ a2^2\ a4\ a5\ a6^4 + 736\,479\ a1\ a3\ a4\ a5\ a6^4 +$
$736\,479\ a2\ a3\ a4\ a5\ a6^4 + 347\,841\ a3^2\ a4\ a5\ a6^4 + 347\,841\ a1\ a4^2\ a5\ a6^4 +$
$347\,841\ a2\ a4^2\ a5\ a6^4 + 347\,841\ a3\ a4^2\ a5\ a6^4 + 101\,835\ a4^3\ a5\ a6^4 + 164\,205\ a1^2\ a5^2\ a6^4 +$
$347\,841\ a1\ a2\ a5^2\ a6^4 + 164\,205\ a2^2\ a5^2\ a6^4 + 347\,841\ a1\ a3\ a5^2\ a6^4 + 347\,841\ a2\ a3\ a5^2\ a6^4 +$
$164\,205\ a3^2\ a5^2\ a6^4 + 347\,841\ a1\ a4\ a5^2\ a6^4 + 347\,841\ a2\ a4\ a5^2\ a6^4 + 347\,841\ a3\ a4\ a5^2\ a6^4 +$
$164\,205\ a4^2\ a5^2\ a6^4 + 101\,835\ a1\ a5^3\ a6^4 + 101\,835\ a2\ a5^3\ a6^4 + 101\,835\ a3\ a5^3\ a6^4 +$
$101\,835\ a4\ a5^3\ a6^4 + 20\,385\ a5^4\ a6^4 + 14\,700\ a1^3\ a6^5 + 50\,589\ a1^2\ a2\ a6^5 +$
$50\,589\ a1\ a2^2\ a6^5 + 14\,700\ a2^3\ a6^5 + 50\,589\ a1^2\ a3\ a6^5 + 107\,436\ a1\ a2\ a3\ a6^5 +$
$50\,589\ a2^2\ a3\ a6^5 + 50\,589\ a1\ a3^2\ a6^5 + 50\,589\ a2\ a3^2\ a6^5 + 14\,700\ a3^3\ a6^5 +$
$50\,589\ a1^2\ a4\ a6^5 + 107\,436\ a1\ a2\ a4\ a6^5 + 50\,589\ a2^2\ a4\ a6^5 + 107\,436\ a1\ a3\ a4\ a6^5 +$
$107\,436\ a2\ a3\ a4\ a6^5 + 50\,589\ a3^2\ a4\ a6^5 + 50\,589\ a1\ a4^2\ a6^5 + 50\,589\ a2\ a4^2\ a6^5 +$
$50\,589\ a3\ a4^2\ a6^5 + 14\,700\ a4^3\ a6^5 + 50\,589\ a1^2\ a5\ a6^5 + 107\,436\ a1\ a2\ a5\ a6^5 +$

$50\,589\ a2^2\ a5\ a6^5 + 107\,436\ a1\ a3\ a5\ a6^5 + 107\,436\ a2\ a3\ a5\ a6^5 + 50\,589\ a3^2\ a5\ a6^5 +$
$107\,436\ a1\ a4\ a5\ a6^5 + 107\,436\ a2\ a4\ a5\ a6^5 + 107\,436\ a3\ a4\ a5\ a6^5 + 50\,589\ a4^2\ a5\ a6^5 +$
$50\,589\ a1\ a5^2\ a6^5 + 50\,589\ a2\ a5^2\ a6^5 + 50\,589\ a3\ a5^2\ a6^5 + 50\,589\ a4\ a5^2\ a6^5 +$
$14\,700\ a5^3\ a6^5 + 5334\ a1^2\ a6^6 + 11\,382\ a1\ a2\ a6^6 + 5334\ a2^2\ a6^6 + 11\,382\ a1\ a3\ a6^6 +$
$11\,382\ a2\ a3\ a6^6 + 5334\ a3^2\ a6^6 + 11\,382\ a1\ a4\ a6^6 + 11\,382\ a2\ a4\ a6^6 + 11\,382\ a3\ a4\ a6^6 +$
$5334\ a4^2\ a6^6 + 11\,382\ a1\ a5\ a6^6 + 11\,382\ a2\ a5\ a6^6 + 11\,382\ a3\ a5\ a6^6 + 11\,382\ a4\ a5\ a6^6 +$
$5334\ a5^2\ a6^6 + 864\ a1\ a6^7 + 864\ a2\ a6^7 + 864\ a3\ a6^7 + 864\ a4\ a6^7 + 864\ a5\ a6^7 + 45\ a6^8$

In[68]:=
```
H7 = SeriesCoefficient[%66, {t, 0, 7}]
```

Out[68]=

$120\ a1^7 + 1596\ a1^6\ a2 + 7140\ a1^5\ a2^2 + 14\,420\ a1^4\ a2^3 + 14\,420\ a1^3\ a2^4 + 7140\ a1^2\ a2^5 +$
$1596\ a1\ a2^6 + 120\ a2^7 + 1596\ a1^6\ a3 + 15\,204\ a1^5\ a2\ a3 + 49\,497\ a1^4\ a2^2\ a3 +$
$71\,918\ a1^3\ a2^3\ a3 + 49\,497\ a1^2\ a2^4\ a3 + 15\,204\ a1\ a2^5\ a3 + 1596\ a2^6\ a3 + 7140\ a1^5\ a3^2 +$
$49\,497\ a1^4\ a2\ a3^2 + 115\,920\ a1^3\ a2^2\ a3^2 + 115\,920\ a1^2\ a2^3\ a3^2 + 49\,497\ a1\ a2^4\ a3^2 +$
$7140\ a2^5\ a3^2 + 14\,420\ a1^4\ a3^3 + 71\,918\ a1^3\ a2\ a3^3 + 115\,920\ a1^2\ a2^2\ a3^3 + 71\,918\ a1\ a2^3\ a3^3 +$
$14\,420\ a2^4\ a3^3 + 14\,420\ a1^3\ a3^4 + 49\,497\ a1^2\ a2\ a3^4 + 49\,497\ a1\ a2^2\ a3^4 + 14\,420\ a2^3\ a3^4 +$
$7140\ a1^2\ a3^5 + 15\,204\ a1\ a2\ a3^5 + 7140\ a2^2\ a3^5 + 1596\ a1\ a3^6 + 1596\ a2\ a3^6 +$
$120\ a3^7 + 1596\ a1^6\ a4 + 15\,204\ a1^5\ a2\ a4 + 49\,497\ a1^4\ a2^2\ a4 + 71\,918\ a1^3\ a2^3\ a4 +$
$49\,497\ a1^2\ a2^4\ a4 + 15\,204\ a1\ a2^5\ a4 + 1596\ a2^6\ a4 + 15\,204\ a1^5\ a3\ a4 + 105\,056\ a1^4\ a2\ a3\ a4 +$
$245\,672\ a1^3\ a2^2\ a3\ a4 + 245\,672\ a1^2\ a2^3\ a3\ a4 + 105\,056\ a1\ a2^4\ a3\ a4 + 15\,204\ a2^5\ a3\ a4 +$
$49\,497\ a1^4\ a3^2\ a4 + 245\,672\ a1^3\ a2\ a3^2\ a4 + 395\,388\ a1^2\ a2^2\ a3^2\ a4 + 245\,672\ a1\ a2^3\ a3^2\ a4 +$
$49\,497\ a2^4\ a3^2\ a4 + 71\,918\ a1^3\ a3^3\ a4 + 245\,672\ a1^2\ a2\ a3^3\ a4 + 245\,672\ a1\ a2^2\ a3^3\ a4 +$
$71\,918\ a2^3\ a3^3\ a4 + 49\,497\ a1^2\ a3^4\ a4 + 105\,056\ a1\ a2\ a3^4\ a4 + 49\,497\ a2^2\ a3^4\ a4 +$
$15\,204\ a1\ a3^5\ a4 + 15\,204\ a2\ a3^5\ a4 + 1596\ a3^6\ a4 + 7140\ a1^5\ a4^2 + 49\,497\ a1^4\ a2\ a4^2 +$
$115\,920\ a1^3\ a2^2\ a4^2 + 115\,920\ a1^2\ a2^3\ a4^2 + 49\,497\ a1\ a2^4\ a4^2 + 7140\ a2^5\ a4^2 +$
$49\,497\ a1^4\ a3\ a4^2 + 245\,672\ a1^3\ a2\ a3\ a4^2 + 395\,388\ a1^2\ a2^2\ a3\ a4^2 + 245\,672\ a1\ a2^3\ a3\ a4^2 +$
$49\,497\ a2^4\ a3\ a4^2 + 115\,920\ a1^3\ a3^2\ a4^2 + 395\,388\ a1^2\ a2\ a3^2\ a4^2 + 395\,388\ a1\ a2^2\ a3^2\ a4^2 +$
$115\,920\ a2^3\ a3^2\ a4^2 + 115\,920\ a1^2\ a3^3\ a4^2 + 245\,672\ a1\ a2\ a3^3\ a4^2 + 115\,920\ a2^2\ a3^3\ a4^2 +$
$49\,497\ a1\ a3^4\ a4^2 + 49\,497\ a2\ a3^4\ a4^2 + 7140\ a3^5\ a4^2 + 14\,420\ a1^4\ a4^3 + 71\,918\ a1^3\ a2\ a4^3 +$
$115\,920\ a1^2\ a2^2\ a4^3 + 71\,918\ a1\ a2^3\ a4^3 + 14\,420\ a2^4\ a4^3 + 71\,918\ a1^3\ a3\ a4^3 +$
$245\,672\ a1^2\ a2\ a3\ a4^3 + 245\,672\ a1\ a2^2\ a3\ a4^3 + 71\,918\ a2^3\ a3\ a4^3 + 115\,920\ a1^2\ a3^2\ a4^3 +$
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$49\,497\ a1^2\ a3\ a4^4 + 105\,056\ a1\ a2\ a3\ a4^4 + 49\,497\ a2^2\ a3\ a4^4 + 49\,497\ a1\ a3^2\ a4^4 +$
$49\,497\ a2\ a3^2\ a4^4 + 14\,420\ a3^3\ a4^4 + 7140\ a1^2\ a4^5 + 15\,204\ a1\ a2\ a4^5 + 7140\ a2^2\ a4^5 +$
$15\,204\ a1\ a3\ a4^5 + 15\,204\ a2\ a3\ a4^5 + 7140\ a3^2\ a4^5 + 1596\ a1\ a4^6 + 1596\ a2\ a4^6 +$
$1596\ a3\ a4^6 + 120\ a4^7 + 1596\ a1^6\ a5 + 15\,204\ a1^5\ a2\ a5 + 49\,497\ a1^4\ a2^2\ a5 +$
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$105\,056\ a1^4\ a2\ a3\ a5 + 245\,672\ a1^3\ a2^2\ a3\ a5 + 245\,672\ a1^2\ a2^3\ a3\ a5 + 105\,056\ a1\ a2^4\ a3\ a5 +$
$15\,204\ a2^5\ a3\ a5 + 49\,497\ a1^4\ a3^2\ a5 + 245\,672\ a1^3\ a2\ a3^2\ a5 + 395\,388\ a1^2\ a2^2\ a3^2\ a5 +$
$245\,672\ a1\ a2^3\ a3^2\ a5 + 49\,497\ a2^4\ a3^2\ a5 + 71\,918\ a1^3\ a3^3\ a5 + 245\,672\ a1^2\ a2\ a3^3\ a5 +$
$245\,672\ a1\ a2^2\ a3^3\ a5 + 71\,918\ a2^3\ a3^3\ a5 + 49\,497\ a1^2\ a3^4\ a5 + 105\,056\ a1\ a2\ a3^4\ a5 +$
$49\,497\ a2^2\ a3^4\ a5 + 15\,204\ a1\ a3^5\ a5 + 15\,204\ a2\ a3^5\ a5 + 1596\ a3^6\ a5 + 15\,204\ a1^5\ a4\ a5 +$
$105\,056\ a1^4\ a2\ a4\ a5 + 245\,672\ a1^3\ a2^2\ a4\ a5 + 245\,672\ a1^2\ a2^3\ a4\ a5 + 105\,056\ a1\ a2^4\ a4\ a5 +$
$15\,204\ a2^5\ a4\ a5 + 105\,056\ a1^4\ a3\ a4\ a5 + 520\,436\ a1^3\ a2\ a3\ a4\ a5 + 837\,102\ a1^2\ a2^2\ a3\ a4\ a5 +$
$520\,436\ a1\ a2^3\ a3\ a4\ a5 + 105\,056\ a2^4\ a3\ a4\ a5 + 245\,672\ a1^3\ a3^2\ a4\ a5 +$
$837\,102\ a1^2\ a2\ a3^2\ a4\ a5 + 837\,102\ a1\ a2^2\ a3^2\ a4\ a5 + 245\,672\ a2^3\ a3^2\ a4\ a5 +$
$245\,672\ a1^2\ a3^3\ a4\ a5 + 520\,436\ a1\ a2\ a3^3\ a4\ a5 + 245\,672\ a2^2\ a3^3\ a4\ a5 +$

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$245\,672\ a1^3\ a2\ a4^2\ a5 + 395\,388\ a1^2\ a2^2\ a4^2\ a5 + 245\,672\ a1\ a2^3\ a4^2\ a5 + 49\,497\ a2^4\ a4^2\ a5 +$
$245\,672\ a1^3\ a3\ a4^2\ a5 + 837\,102\ a1^2\ a2\ a3\ a4^2\ a5 + 837\,102\ a1\ a2^2\ a3\ a4^2\ a5 +$
$245\,672\ a2^3\ a3\ a4^2\ a5 + 395\,388\ a1^2\ a3^2\ a4^2\ a5 + 837\,102\ a1\ a2\ a3^2\ a4^2\ a5 +$
$395\,388\ a2^2\ a3^2\ a4^2\ a5 + 245\,672\ a1\ a3^3\ a4^2\ a5 + 245\,672\ a2\ a3^3\ a4^2\ a5 + 49\,497\ a3^4\ a4^2\ a5 +$
$71\,918\ a1^3\ a4^3\ a5 + 245\,672\ a1^2\ a2\ a4^3\ a5 + 245\,672\ a1\ a2^2\ a4^3\ a5 + 71\,918\ a2^3\ a4^3\ a5 +$
$245\,672\ a1^2\ a3\ a4^3\ a5 + 520\,436\ a1\ a2\ a3\ a4^3\ a5 + 245\,672\ a2^2\ a3\ a4^3\ a5 +$
$245\,672\ a1\ a3^2\ a4^3\ a5 + 245\,672\ a2\ a3^2\ a4^3\ a5 + 71\,918\ a3^3\ a4^3\ a5 + 49\,497\ a1^2\ a4^4\ a5 +$
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$49\,497\ a3^2\ a4^4\ a5 + 15\,204\ a1\ a4^5\ a5 + 15\,204\ a2\ a4^5\ a5 + 15\,204\ a3\ a4^5\ a5 + 1596\ a4^6\ a5 +$
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$49\,497\ a1\ a2^4\ a5^2 + 7140\ a2^5\ a5^2 + 49\,497\ a1^4\ a3\ a5^2 + 245\,672\ a1^3\ a2\ a3\ a5^2 +$
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$245\,672\ a1\ a2^3\ a4\ a5^2 + 49\,497\ a2^4\ a4\ a5^2 + 245\,672\ a1^3\ a3\ a4\ a5^2 + 837\,102\ a1^2\ a2\ a3\ a4\ a5^2 +$
$837\,102\ a1\ a2^2\ a3\ a4\ a5^2 + 245\,672\ a2^3\ a3\ a4\ a5^2 + 395\,388\ a1^2\ a3^2\ a4\ a5^2 +$
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$395\,388\ a1\ a2^2\ a4^2\ a5^2 + 115\,920\ a2^3\ a4^2\ a5^2 + 395\,388\ a1^2\ a3\ a4^2\ a5^2 +$
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$71\,918\ a1^3\ a2\ a5^3 + 115\,920\ a1^2\ a2^2\ a5^3 + 71\,918\ a1\ a2^3\ a5^3 + 14\,420\ a2^4\ a5^3 +$
$71\,918\ a1^3\ a3\ a5^3 + 245\,672\ a1^2\ a2\ a3\ a5^3 + 245\,672\ a1\ a2^2\ a3\ a5^3 + 71\,918\ a2^3\ a3\ a5^3 +$
$115\,920\ a1^2\ a3^2\ a5^3 + 245\,672\ a1\ a2\ a3^2\ a5^3 + 115\,920\ a2^2\ a3^2\ a5^3 + 71\,918\ a1\ a3^3\ a5^3 +$
$71\,918\ a2\ a3^3\ a5^3 + 14\,420\ a3^4\ a5^3 + 71\,918\ a1^3\ a4\ a5^3 + 245\,672\ a1^2\ a2\ a4\ a5^3 +$
$245\,672\ a1\ a2^2\ a4\ a5^3 + 71\,918\ a2^3\ a4\ a5^3 + 245\,672\ a1^2\ a3\ a4\ a5^3 + 520\,436\ a1\ a2\ a3\ a4\ a5^3 +$
$245\,672\ a2^2\ a3\ a4\ a5^3 + 245\,672\ a1\ a3^2\ a4\ a5^3 + 245\,672\ a2\ a3^2\ a4\ a5^3 + 71\,918\ a3^3\ a4\ a5^3 +$
$115\,920\ a1^2\ a4^2\ a5^3 + 245\,672\ a1\ a2\ a4^2\ a5^3 + 115\,920\ a2^2\ a4^2\ a5^3 + 245\,672\ a1\ a3\ a4^2\ a5^3 +$
$245\,672\ a2\ a3\ a4^2\ a5^3 + 115\,920\ a3^2\ a4^2\ a5^3 + 71\,918\ a1\ a4^3\ a5^3 + 71\,918\ a2\ a4^3\ a5^3 +$
$71\,918\ a3\ a4^3\ a5^3 + 14\,420\ a4^4\ a5^3 + 14\,420\ a1^3\ a5^4 + 49\,497\ a1^2\ a2\ a5^4 + 49\,497\ a1\ a2^2\ a5^4 +$
$14\,420\ a2^3\ a5^4 + 49\,497\ a1^2\ a3\ a5^4 + 105\,056\ a1\ a2\ a3\ a5^4 + 49\,497\ a2^2\ a3\ a5^4 +$
$49\,497\ a1\ a3^2\ a5^4 + 49\,497\ a2\ a3^2\ a5^4 + 14\,420\ a3^3\ a5^4 + 49\,497\ a1^2\ a4\ a5^4 +$
$105\,056\ a1\ a2\ a4\ a5^4 + 49\,497\ a2^2\ a4\ a5^4 + 105\,056\ a1\ a3\ a4\ a5^4 + 105\,056\ a2\ a3\ a4\ a5^4 +$
$49\,497\ a3^2\ a4\ a5^4 + 49\,497\ a1\ a4^2\ a5^4 + 49\,497\ a2\ a4^2\ a5^4 + 49\,497\ a3\ a4^2\ a5^4 +$
$14\,420\ a4^3\ a5^4 + 7140\ a1^2\ a5^5 + 15\,204\ a1\ a2\ a5^5 + 7140\ a2^2\ a5^5 + 15\,204\ a1\ a3\ a5^5 +$
$15\,204\ a2\ a3\ a5^5 + 7140\ a3^2\ a5^5 + 15\,204\ a1\ a4\ a5^5 + 15\,204\ a2\ a4\ a5^5 + 15\,204\ a3\ a4\ a5^5 +$
$7140\ a4^2\ a5^5 + 1596\ a1\ a5^6 + 1596\ a2\ a5^6 + 1596\ a3\ a5^6 + 1596\ a4\ a5^6 + 120\ a5^7 +$
$1596\ a1^6\ a6 + 15\,204\ a1^5\ a2\ a6 + 49\,497\ a1^4\ a2^2\ a6 + 71\,918\ a1^3\ a2^3\ a6 + 49\,497\ a1^2\ a2^4\ a6 +$
$15\,204\ a1\ a2^5\ a6 + 1596\ a2^6\ a6 + 15\,204\ a1^5\ a3\ a6 + 105\,056\ a1^4\ a2\ a3\ a6 +$
$245\,672\ a1^3\ a2^2\ a3\ a6 + 245\,672\ a1^2\ a2^3\ a3\ a6 + 105\,056\ a1\ a2^4\ a3\ a6 + 15\,204\ a2^5\ a3\ a6 +$
$49\,497\ a1^4\ a3^2\ a6 + 245\,672\ a1^3\ a2\ a3^2\ a6 + 395\,388\ a1^2\ a2^2\ a3^2\ a6 + 245\,672\ a1\ a2^3\ a3^2\ a6 +$
$49\,497\ a2^4\ a3^2\ a6 + 71\,918\ a1^3\ a3^3\ a6 + 245\,672\ a1^2\ a2\ a3^3\ a6 + 245\,672\ a1\ a2^2\ a3^3\ a6 +$
$71\,918\ a2^3\ a3^3\ a6 + 49\,497\ a1^2\ a3^4\ a6 + 105\,056\ a1\ a2\ a3^4\ a6 + 49\,497\ a2^2\ a3^4\ a6 +$

$15\,204\ a1\ a3^5\ a6 + 15\,204\ a2\ a3^5\ a6 + 1596\ a3^6\ a6 + 15\,204\ a1^5\ a4\ a6 + 105\,056\ a1^4\ a2\ a4\ a6 +$
$245\,672\ a1^3\ a2^2\ a4\ a6 + 245\,672\ a1^2\ a2^3\ a4\ a6 + 105\,056\ a1\ a2^4\ a4\ a6 + 15\,204\ a2^5\ a4\ a6 +$
$105\,056\ a1^4\ a3\ a4\ a6 + 520\,436\ a1^3\ a2\ a3\ a4\ a6 + 837\,102\ a1^2\ a2^2\ a3\ a4\ a6 +$
$520\,436\ a1\ a2^3\ a3\ a4\ a6 + 105\,056\ a2^4\ a3\ a4\ a6 + 245\,672\ a1^3\ a3^2\ a4\ a6 +$
$837\,102\ a1^2\ a2\ a3^2\ a4\ a6 + 837\,102\ a1\ a2^2\ a3^2\ a4\ a6 + 245\,672\ a2^3\ a3^2\ a4\ a6 +$
$245\,672\ a1^2\ a3^3\ a4\ a6 + 520\,436\ a1\ a2\ a3^3\ a4\ a6 + 245\,672\ a2^2\ a3^3\ a4\ a6 +$
$105\,056\ a1\ a3^4\ a4\ a6 + 105\,056\ a2\ a3^4\ a4\ a6 + 15\,204\ a3^5\ a4\ a6 + 49\,497\ a1^4\ a4^2\ a6 +$
$245\,672\ a1^3\ a2\ a4^2\ a6 + 395\,388\ a1^2\ a2^2\ a4^2\ a6 + 245\,672\ a1\ a2^3\ a4^2\ a6 + 49\,497\ a2^4\ a4^2\ a6 +$
$245\,672\ a1^3\ a3\ a4^2\ a6 + 837\,102\ a1^2\ a2\ a3\ a4^2\ a6 + 837\,102\ a1\ a2^2\ a3\ a4^2\ a6 +$
$245\,672\ a2^3\ a3\ a4^2\ a6 + 395\,388\ a1^2\ a3^2\ a4^2\ a6 + 837\,102\ a1\ a2\ a3^2\ a4^2\ a6 +$
$395\,388\ a2^2\ a3^2\ a4^2\ a6 + 245\,672\ a1\ a3^3\ a4^2\ a6 + 245\,672\ a2\ a3^3\ a4^2\ a6 + 49\,497\ a3^4\ a4^2\ a6 +$
$71\,918\ a1^3\ a4^3\ a6 + 245\,672\ a1^2\ a2\ a4^3\ a6 + 245\,672\ a1\ a2^2\ a4^3\ a6 + 71\,918\ a2^3\ a4^3\ a6 +$
$245\,672\ a1^2\ a3\ a4^3\ a6 + 520\,436\ a1\ a2\ a3\ a4^3\ a6 + 245\,672\ a2^2\ a3\ a4^3\ a6 +$
$245\,672\ a1\ a3^2\ a4^3\ a6 + 245\,672\ a2\ a3^2\ a4^3\ a6 + 71\,918\ a3^3\ a4^3\ a6 + 49\,497\ a1^2\ a4^4\ a6 +$
$105\,056\ a1\ a2\ a4^4\ a6 + 49\,497\ a2^2\ a4^4\ a6 + 105\,056\ a1\ a3\ a4^4\ a6 + 105\,056\ a2\ a3\ a4^4\ a6 +$
$49\,497\ a3^2\ a4^4\ a6 + 15\,204\ a1\ a4^5\ a6 + 15\,204\ a2\ a4^5\ a6 + 15\,204\ a3\ a4^5\ a6 + 1596\ a4^6\ a6 +$
$15\,204\ a1^5\ a5\ a6 + 105\,056\ a1^4\ a2\ a5\ a6 + 245\,672\ a1^3\ a2^2\ a5\ a6 + 245\,672\ a1^2\ a2^3\ a5\ a6 +$
$105\,056\ a1\ a2^4\ a5\ a6 + 15\,204\ a2^5\ a5\ a6 + 105\,056\ a1^4\ a3\ a5\ a6 + 520\,436\ a1^3\ a2\ a3\ a5\ a6 +$
$837\,102\ a1^2\ a2^2\ a3\ a5\ a6 + 520\,436\ a1\ a2^3\ a3\ a5\ a6 + 105\,056\ a2^4\ a3\ a5\ a6 +$
$245\,672\ a1^3\ a3^2\ a5\ a6 + 837\,102\ a1^2\ a2\ a3^2\ a5\ a6 + 837\,102\ a1\ a2^2\ a3^2\ a5\ a6 +$
$245\,672\ a2^3\ a3^2\ a5\ a6 + 245\,672\ a1^2\ a3^3\ a5\ a6 + 520\,436\ a1\ a2\ a3^3\ a5\ a6 +$
$245\,672\ a2^2\ a3^3\ a5\ a6 + 105\,056\ a1\ a3^4\ a5\ a6 + 105\,056\ a2\ a3^4\ a5\ a6 + 15\,204\ a3^5\ a5\ a6 +$
$105\,056\ a1^4\ a4\ a5\ a6 + 520\,436\ a1^3\ a2\ a4\ a5\ a6 + 837\,102\ a1^2\ a2^2\ a4\ a5\ a6 +$
$520\,436\ a1\ a2^3\ a4\ a5\ a6 + 105\,056\ a2^4\ a4\ a5\ a6 + 520\,436\ a1^3\ a3\ a4\ a5\ a6 +$
$1\,771\,980\ a1^2\ a2\ a3\ a4\ a5\ a6 + 1\,771\,980\ a1\ a2^2\ a3\ a4\ a5\ a6 + 520\,436\ a2^3\ a3\ a4\ a5\ a6 +$
$837\,102\ a1^2\ a3^2\ a4\ a5\ a6 + 1\,771\,980\ a1\ a2\ a3^2\ a4\ a5\ a6 + 837\,102\ a2^2\ a3^2\ a4\ a5\ a6 +$
$520\,436\ a1\ a3^3\ a4\ a5\ a6 + 520\,436\ a2\ a3^3\ a4\ a5\ a6 + 105\,056\ a3^4\ a4\ a5\ a6 +$
$245\,672\ a1^3\ a4^2\ a5\ a6 + 837\,102\ a1^2\ a2\ a4^2\ a5\ a6 + 837\,102\ a1\ a2^2\ a4^2\ a5\ a6 +$
$245\,672\ a2^3\ a4^2\ a5\ a6 + 837\,102\ a1^2\ a3\ a4^2\ a5\ a6 + 1\,771\,980\ a1\ a2\ a3\ a4^2\ a5\ a6 +$
$837\,102\ a2^2\ a3\ a4^2\ a5\ a6 + 837\,102\ a1\ a3^2\ a4^2\ a5\ a6 + 837\,102\ a2\ a3^2\ a4^2\ a5\ a6 +$
$245\,672\ a3^3\ a4^2\ a5\ a6 + 245\,672\ a1^2\ a4^3\ a5\ a6 + 520\,436\ a1\ a2\ a4^3\ a5\ a6 +$
$245\,672\ a2^2\ a4^3\ a5\ a6 + 520\,436\ a1\ a3\ a4^3\ a5\ a6 + 520\,436\ a2\ a3\ a4^3\ a5\ a6 +$
$245\,672\ a3^2\ a4^3\ a5\ a6 + 105\,056\ a1\ a4^4\ a5\ a6 + 105\,056\ a2\ a4^4\ a5\ a6 +$
$105\,056\ a3\ a4^4\ a5\ a6 + 15\,204\ a4^5\ a5\ a6 + 49\,497\ a1^4\ a5^2\ a6 + 245\,672\ a1^3\ a2\ a5^2\ a6 +$
$395\,388\ a1^2\ a2^2\ a5^2\ a6 + 245\,672\ a1\ a2^3\ a5^2\ a6 + 49\,497\ a2^4\ a5^2\ a6 + 245\,672\ a1^3\ a3\ a5^2\ a6 +$
$837\,102\ a1^2\ a2\ a3\ a5^2\ a6 + 837\,102\ a1\ a2^2\ a3\ a5^2\ a6 + 245\,672\ a2^3\ a3\ a5^2\ a6 +$
$395\,388\ a1^2\ a3^2\ a5^2\ a6 + 837\,102\ a1\ a2\ a3^2\ a5^2\ a6 + 395\,388\ a2^2\ a3^2\ a5^2\ a6 +$
$245\,672\ a1\ a3^3\ a5^2\ a6 + 245\,672\ a2\ a3^3\ a5^2\ a6 + 49\,497\ a3^4\ a5^2\ a6 + 245\,672\ a1^3\ a4\ a5^2\ a6 +$
$837\,102\ a1^2\ a2\ a4\ a5^2\ a6 + 837\,102\ a1\ a2^2\ a4\ a5^2\ a6 + 245\,672\ a2^3\ a4\ a5^2\ a6 +$
$837\,102\ a1^2\ a3\ a4\ a5^2\ a6 + 1\,771\,980\ a1\ a2\ a3\ a4\ a5^2\ a6 + 837\,102\ a2^2\ a3\ a4\ a5^2\ a6 +$
$837\,102\ a1\ a3^2\ a4\ a5^2\ a6 + 837\,102\ a2\ a3^2\ a4\ a5^2\ a6 + 245\,672\ a3^3\ a4\ a5^2\ a6 +$
$395\,388\ a1^2\ a4^2\ a5^2\ a6 + 837\,102\ a1\ a2\ a4^2\ a5^2\ a6 + 395\,388\ a2^2\ a4^2\ a5^2\ a6 +$
$837\,102\ a1\ a3\ a4^2\ a5^2\ a6 + 837\,102\ a2\ a3\ a4^2\ a5^2\ a6 + 395\,388\ a3^2\ a4^2\ a5^2\ a6 +$
$245\,672\ a1\ a4^3\ a5^2\ a6 + 245\,672\ a2\ a4^3\ a5^2\ a6 + 245\,672\ a3\ a4^3\ a5^2\ a6 + 49\,497\ a4^4\ a5^2\ a6 +$
$71\,918\ a1^3\ a5^3\ a6 + 245\,672\ a1^2\ a2\ a5^3\ a6 + 245\,672\ a1\ a2^2\ a5^3\ a6 + 71\,918\ a2^3\ a5^3\ a6 +$
$245\,672\ a1^2\ a3\ a5^3\ a6 + 520\,436\ a1\ a2\ a3\ a5^3\ a6 + 245\,672\ a2^2\ a3\ a5^3\ a6 +$
$245\,672\ a1\ a3^2\ a5^3\ a6 + 245\,672\ a2\ a3^2\ a5^3\ a6 + 71\,918\ a3^3\ a5^3\ a6 + 245\,672\ a1^2\ a4\ a5^3\ a6 +$

$520436\, a1\, a2\, a4\, a5^3\, a6 + 245672\, a2^2\, a4\, a5^3\, a6 + 520436\, a1\, a3\, a4\, a5^3\, a6 +$
$520436\, a2\, a3\, a4\, a5^3\, a6 + 245672\, a3^2\, a4\, a5^3\, a6 + 245672\, a1\, a4^2\, a5^3\, a6 +$
$245672\, a2\, a4^2\, a5^3\, a6 + 245672\, a3\, a4^2\, a5^3\, a6 + 71918\, a4^3\, a5^3\, a6 + 49497\, a1^2\, a5^4\, a6 +$
$105056\, a1\, a2\, a5^4\, a6 + 49497\, a2^2\, a5^4\, a6 + 105056\, a1\, a3\, a5^4\, a6 + 105056\, a2\, a3\, a5^4\, a6 +$
$49497\, a3^2\, a5^4\, a6 + 105056\, a1\, a4\, a5^4\, a6 + 105056\, a2\, a4\, a5^4\, a6 + 105056\, a3\, a4\, a5^4\, a6 +$
$49497\, a4^2\, a5^4\, a6 + 15204\, a1\, a5^5\, a6 + 15204\, a2\, a5^5\, a6 + 15204\, a3\, a5^5\, a6 +$
$15204\, a4\, a5^5\, a6 + 1596\, a5^6\, a6 + 7140\, a1^5\, a6^2 + 49497\, a1^4\, a2\, a6^2 + 115920\, a1^3\, a2^2\, a6^2 +$
$115920\, a1^2\, a2^3\, a6^2 + 49497\, a1\, a2^4\, a6^2 + 7140\, a2^5\, a6^2 + 49497\, a1^4\, a3\, a6^2 +$
$245672\, a1^3\, a2\, a3\, a6^2 + 395388\, a1^2\, a2^2\, a3\, a6^2 + 245672\, a1\, a2^3\, a3\, a6^2 + 49497\, a2^4\, a3\, a6^2 +$
$115920\, a1^3\, a3^2\, a6^2 + 395388\, a1^2\, a2\, a3^2\, a6^2 + 395388\, a1\, a2^2\, a3^2\, a6^2 + 115920\, a2^3\, a3^2\, a6^2 +$
$115920\, a1^2\, a3^3\, a6^2 + 245672\, a1\, a2\, a3^3\, a6^2 + 115920\, a2^2\, a3^3\, a6^2 + 49497\, a1\, a3^4\, a6^2 +$
$49497\, a2\, a3^4\, a6^2 + 7140\, a3^5\, a6^2 + 49497\, a1^4\, a4\, a6^2 + 245672\, a1^3\, a2\, a4\, a6^2 +$
$395388\, a1^2\, a2^2\, a4\, a6^2 + 245672\, a1\, a2^3\, a4\, a6^2 + 49497\, a2^4\, a4\, a6^2 + 245672\, a1^3\, a3\, a4\, a6^2 +$
$837102\, a1^2\, a2\, a3\, a4\, a6^2 + 837102\, a1\, a2^2\, a3\, a4\, a6^2 + 245672\, a2^3\, a3\, a4\, a6^2 +$
$395388\, a1^2\, a3^2\, a4\, a6^2 + 837102\, a1\, a2\, a3^2\, a4\, a6^2 + 395388\, a2^2\, a3^2\, a4\, a6^2 +$
$245672\, a1\, a3^3\, a4\, a6^2 + 245672\, a2\, a3^3\, a4\, a6^2 + 49497\, a3^4\, a4\, a6^2 + 115920\, a1^3\, a4^2\, a6^2 +$
$395388\, a1^2\, a2\, a4^2\, a6^2 + 395388\, a1\, a2^2\, a4^2\, a6^2 + 115920\, a2^3\, a4^2\, a6^2 +$
$395388\, a1^2\, a3\, a4^2\, a6^2 + 837102\, a1\, a2\, a3\, a4^2\, a6^2 + 395388\, a2^2\, a3\, a4^2\, a6^2 +$
$395388\, a1\, a3^2\, a4^2\, a6^2 + 395388\, a2\, a3^2\, a4^2\, a6^2 + 115920\, a3^3\, a4^2\, a6^2 +$
$115920\, a1^2\, a4^3\, a6^2 + 245672\, a1\, a2\, a4^3\, a6^2 + 115920\, a2^2\, a4^3\, a6^2 + 245672\, a1\, a3\, a4^3\, a6^2 +$
$245672\, a2\, a3\, a4^3\, a6^2 + 115920\, a3^2\, a4^3\, a6^2 + 49497\, a1\, a4^4\, a6^2 + 49497\, a2\, a4^4\, a6^2 +$
$49497\, a3\, a4^4\, a6^2 + 7140\, a4^5\, a6^2 + 49497\, a1^4\, a5\, a6^2 + 245672\, a1^3\, a2\, a5\, a6^2 +$
$395388\, a1^2\, a2^2\, a5\, a6^2 + 245672\, a1\, a2^3\, a5\, a6^2 + 49497\, a2^4\, a5\, a6^2 + 245672\, a1^3\, a3\, a5\, a6^2 +$
$837102\, a1^2\, a2\, a3\, a5\, a6^2 + 837102\, a1\, a2^2\, a3\, a5\, a6^2 + 245672\, a2^3\, a3\, a5\, a6^2 +$
$395388\, a1^2\, a3^2\, a5\, a6^2 + 837102\, a1\, a2\, a3^2\, a5\, a6^2 + 395388\, a2^2\, a3^2\, a5\, a6^2 +$
$245672\, a1\, a3^3\, a5\, a6^2 + 245672\, a2\, a3^3\, a5\, a6^2 + 49497\, a3^4\, a5\, a6^2 + 245672\, a1^3\, a4\, a5\, a6^2 +$
$837102\, a1^2\, a2\, a4\, a5\, a6^2 + 837102\, a1\, a2^2\, a4\, a5\, a6^2 + 245672\, a2^3\, a4\, a5\, a6^2 +$
$837102\, a1^2\, a3\, a4\, a5\, a6^2 + 1771980\, a1\, a2\, a3\, a4\, a5\, a6^2 + 837102\, a2^2\, a3\, a4\, a5\, a6^2 +$
$837102\, a1\, a3^2\, a4\, a5\, a6^2 + 837102\, a2\, a3^2\, a4\, a5\, a6^2 + 245672\, a3^3\, a4\, a5\, a6^2 +$
$395388\, a1^2\, a4^2\, a5\, a6^2 + 837102\, a1\, a2\, a4^2\, a5\, a6^2 + 395388\, a2^2\, a4^2\, a5\, a6^2 +$
$837102\, a1\, a3\, a4^2\, a5\, a6^2 + 837102\, a2\, a3\, a4^2\, a5\, a6^2 + 395388\, a3^2\, a4^2\, a5\, a6^2 +$
$245672\, a1\, a4^3\, a5\, a6^2 + 245672\, a2\, a4^3\, a5\, a6^2 + 245672\, a3\, a4^3\, a5\, a6^2 + 49497\, a4^4\, a5\, a6^2 +$
$115920\, a1^3\, a5^2\, a6^2 + 395388\, a1^2\, a2\, a5^2\, a6^2 + 395388\, a1\, a2^2\, a5^2\, a6^2 + 115920\, a2^3\, a5^2\, a6^2 +$
$395388\, a1^2\, a3\, a5^2\, a6^2 + 837102\, a1\, a2\, a3\, a5^2\, a6^2 + 395388\, a2^2\, a3\, a5^2\, a6^2 +$
$395388\, a1\, a3^2\, a5^2\, a6^2 + 395388\, a2\, a3^2\, a5^2\, a6^2 + 115920\, a3^3\, a5^2\, a6^2 +$
$395388\, a1^2\, a4\, a5^2\, a6^2 + 837102\, a1\, a2\, a4\, a5^2\, a6^2 + 395388\, a2^2\, a4\, a5^2\, a6^2 +$
$837102\, a1\, a3\, a4\, a5^2\, a6^2 + 837102\, a2\, a3\, a4\, a5^2\, a6^2 + 395388\, a3^2\, a4\, a5^2\, a6^2 +$
$395388\, a1\, a4^2\, a5^2\, a6^2 + 395388\, a2\, a4^2\, a5^2\, a6^2 + 395388\, a3\, a4^2\, a5^2\, a6^2 +$
$115920\, a4^3\, a5^2\, a6^2 + 115920\, a1^2\, a5^3\, a6^2 + 245672\, a1\, a2\, a5^3\, a6^2 + 115920\, a2^2\, a5^3\, a6^2 +$
$245672\, a1\, a3\, a5^3\, a6^2 + 245672\, a2\, a3\, a5^3\, a6^2 + 115920\, a3^2\, a5^3\, a6^2 + 245672\, a1\, a4\, a5^3\, a6^2 +$
$245672\, a2\, a4\, a5^3\, a6^2 + 245672\, a3\, a4\, a5^3\, a6^2 + 115920\, a4^2\, a5^3\, a6^2 + 49497\, a1\, a5^4\, a6^2 +$
$49497\, a2\, a5^4\, a6^2 + 49497\, a3\, a5^4\, a6^2 + 49497\, a4\, a5^4\, a6^2 + 7140\, a5^5\, a6^2 + 14420\, a1^4\, a6^3 +$
$71918\, a1^3\, a2\, a6^3 + 115920\, a1^2\, a2^2\, a6^3 + 71918\, a1\, a2^3\, a6^3 + 14420\, a2^4\, a6^3 +$
$71918\, a1^3\, a3\, a6^3 + 245672\, a1^2\, a2\, a3\, a6^3 + 245672\, a1\, a2^2\, a3\, a6^3 + 71918\, a2^3\, a3\, a6^3 +$
$115920\, a1^2\, a3^2\, a6^3 + 245672\, a1\, a2\, a3^2\, a6^3 + 115920\, a2^2\, a3^2\, a6^3 + 71918\, a1\, a3^3\, a6^3 +$
$71918\, a2\, a3^3\, a6^3 + 14420\, a3^4\, a6^3 + 71918\, a1^3\, a4\, a6^3 + 245672\, a1^2\, a2\, a4\, a6^3 +$
$245672\, a1\, a2^2\, a4\, a6^3 + 71918\, a2^3\, a4\, a6^3 + 245672\, a1^2\, a3\, a4\, a6^3 + 520436\, a1\, a2\, a3\, a4\, a6^3 +$

$245672\, a2^2\, a3\, a4\, a6^3 + 245672\, a1\, a3^2\, a4\, a6^3 + 245672\, a2\, a3^2\, a4\, a6^3 + 71918\, a3^3\, a4\, a6^3 +$
$115920\, a1^2\, a4^2\, a6^3 + 245672\, a1\, a2\, a4^2\, a6^3 + 115920\, a2^2\, a4^2\, a6^3 + 245672\, a1\, a3\, a4^2\, a6^3 +$
$245672\, a2\, a3\, a4^2\, a6^3 + 115920\, a3^2\, a4^2\, a6^3 + 71918\, a1\, a4^3\, a6^3 + 71918\, a2\, a4^3\, a6^3 +$
$71918\, a3\, a4^3\, a6^3 + 14420\, a4^4\, a6^3 + 71918\, a1^3\, a5\, a6^3 + 245672\, a1^2\, a2\, a5\, a6^3 +$
$245672\, a1\, a2^2\, a5\, a6^3 + 71918\, a2^3\, a5\, a6^3 + 245672\, a1^2\, a3\, a5\, a6^3 + 520436\, a1\, a2\, a3\, a5\, a6^3 +$
$245672\, a2^2\, a3\, a5\, a6^3 + 245672\, a1\, a3^2\, a5\, a6^3 + 245672\, a2\, a3^2\, a5\, a6^3 + 71918\, a3^3\, a5\, a6^3 +$
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$245672\, a1\, a4^2\, a5\, a6^3 + 245672\, a2\, a4^2\, a5\, a6^3 + 245672\, a3\, a4^2\, a5\, a6^3 + 71918\, a4^3\, a5\, a6^3 +$
$115920\, a1^2\, a5^2\, a6^3 + 245672\, a1\, a2\, a5^2\, a6^3 + 115920\, a2^2\, a5^2\, a6^3 + 245672\, a1\, a3\, a5^2\, a6^3 +$
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$245672\, a3\, a4\, a5^2\, a6^3 + 115920\, a4^2\, a5^2\, a6^3 + 71918\, a1\, a5^3\, a6^3 + 71918\, a2\, a5^3\, a6^3 +$
$71918\, a3\, a5^3\, a6^3 + 71918\, a4\, a5^3\, a6^3 + 14420\, a5^4\, a6^3 + 14420\, a1^3\, a6^4 + 49497\, a1^2\, a2\, a6^4 +$
$49497\, a1\, a2^2\, a6^4 + 14420\, a2^3\, a6^4 + 49497\, a1^2\, a3\, a6^4 + 105056\, a1\, a2\, a3\, a6^4 +$
$49497\, a2^2\, a3\, a6^4 + 49497\, a1\, a3^2\, a6^4 + 49497\, a2\, a3^2\, a6^4 + 14420\, a3^3\, a6^4 +$
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$105056\, a2\, a3\, a4\, a6^4 + 49497\, a3^2\, a4\, a6^4 + 49497\, a1\, a4^2\, a6^4 + 49497\, a2\, a4^2\, a6^4 +$
$49497\, a3\, a4^2\, a6^4 + 14420\, a4^3\, a6^4 + 49497\, a1^2\, a5\, a6^4 + 105056\, a1\, a2\, a5\, a6^4 +$
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$49497\, a1\, a5^2\, a6^4 + 49497\, a2\, a5^2\, a6^4 + 49497\, a3\, a5^2\, a6^4 + 49497\, a4\, a5^2\, a6^4 +$
$14420\, a5^3\, a6^4 + 7140\, a1^2\, a6^5 + 15204\, a1\, a2\, a6^5 + 7140\, a2^2\, a6^5 + 15204\, a1\, a3\, a6^5 +$
$15204\, a2\, a3\, a6^5 + 7140\, a3^2\, a6^5 + 15204\, a1\, a4\, a6^5 + 15204\, a2\, a4\, a6^5 + 15204\, a3\, a4\, a6^5 +$
$7140\, a4^2\, a6^5 + 15204\, a1\, a5\, a6^5 + 15204\, a2\, a5\, a6^5 + 15204\, a3\, a5\, a6^5 + 15204\, a4\, a5\, a6^5 +$
$7140\, a5^2\, a6^5 + 1596\, a1\, a6^6 + 1596\, a2\, a6^6 + 1596\, a3\, a6^6 + 1596\, a4\, a6^6 + 1596\, a5\, a6^6 + 120\, a6^7$

In[69]:=
```
H6 = SeriesCoefficient[%66, {t, 0, 6}]
```

Out[69]=

$210\, a1^6 + 2016\, a1^5\, a2 + 6594\, a1^4\, a2^2 + 9596\, a1^3\, a2^3 + 6594\, a1^2\, a2^4 + 2016\, a1\, a2^5 + 210\, a2^6 +$
$2016\, a1^5\, a3 + 14028\, a1^4\, a2\, a3 + 32919\, a1^3\, a2^2\, a3 + 32919\, a1^2\, a2^3\, a3 + 14028\, a1\, a2^4\, a3 +$
$2016\, a2^5\, a3 + 6594\, a1^4\, a3^2 + 32919\, a1^3\, a2\, a3^2 + 53082\, a1^2\, a2^2\, a3^2 + 32919\, a1\, a2^3\, a3^2 +$
$6594\, a2^4\, a3^2 + 9596\, a1^3\, a3^3 + 32919\, a1^2\, a2\, a3^3 + 32919\, a1\, a2^2\, a3^3 + 9596\, a2^3\, a3^3 +$
$6594\, a1^2\, a3^4 + 14028\, a1\, a2\, a3^4 + 6594\, a2^2\, a3^4 + 2016\, a1\, a3^5 + 2016\, a2\, a3^5 + 210\, a3^6 +$
$2016\, a1^5\, a4 + 14028\, a1^4\, a2\, a4 + 32919\, a1^3\, a2^2\, a4 + 32919\, a1^2\, a2^3\, a4 + 14028\, a1\, a2^4\, a4 +$
$2016\, a2^5\, a4 + 14028\, a1^4\, a3\, a4 + 69884\, a1^3\, a2\, a3\, a4 + 112614\, a1^2\, a2^2\, a3\, a4 +$
$69884\, a1\, a2^3\, a3\, a4 + 14028\, a2^4\, a3\, a4 + 32919\, a1^3\, a3^2\, a4 + 112614\, a1^2\, a2\, a3^2\, a4 +$
$112614\, a1\, a2^2\, a3^2\, a4 + 32919\, a2^3\, a3^2\, a4 + 32919\, a1^2\, a3^3\, a4 + 69884\, a1\, a2\, a3^3\, a4 +$
$32919\, a2^2\, a3^3\, a4 + 14028\, a1\, a3^4\, a4 + 14028\, a2\, a3^4\, a4 + 2016\, a3^5\, a4 + 6594\, a1^4\, a4^2 +$
$32919\, a1^3\, a2\, a4^2 + 53082\, a1^2\, a2^2\, a4^2 + 32919\, a1\, a2^3\, a4^2 + 6594\, a2^4\, a4^2 + 32919\, a1^3\, a3\, a4^2 +$
$112614\, a1^2\, a2\, a3\, a4^2 + 112614\, a1\, a2^2\, a3\, a4^2 + 32919\, a2^3\, a3\, a4^2 + 53082\, a1^2\, a3^2\, a4^2 +$
$112614\, a1\, a2\, a3^2\, a4^2 + 53082\, a2^2\, a3^2\, a4^2 + 32919\, a1\, a3^3\, a4^2 + 32919\, a2\, a3^3\, a4^2 +$
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$2016\, a3\, a4^5 + 210\, a4^6 + 2016\, a1^5\, a5 + 14028\, a1^4\, a2\, a5 + 32919\, a1^3\, a2^2\, a5 +$
$32919\, a1^2\, a2^3\, a5 + 14028\, a1\, a2^4\, a5 + 2016\, a2^5\, a5 + 14028\, a1^4\, a3\, a5 + 69884\, a1^3\, a2\, a3\, a5 +$
$112614\, a1^2\, a2^2\, a3\, a5 + 69884\, a1\, a2^3\, a3\, a5 + 14028\, a2^4\, a3\, a5 + 32919\, a1^3\, a3^2\, a5 +$

$112614\, a1^2\, a2\, a3^2\, a5 + 112614\, a1\, a2^2\, a3^2\, a5 + 32919\, a2^3\, a3^2\, a5 + 32919\, a1^2\, a3^3\, a5 +$
$69884\, a1\, a2\, a3^3\, a5 + 32919\, a2^2\, a3^3\, a5 + 14028\, a1\, a3^4\, a5 + 14028\, a2\, a3^4\, a5 + 2016\, a3^5\, a5 +$
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$14028\, a2^4\, a4\, a5 + 69884\, a1^3\, a3\, a4\, a5 + 238812\, a1^2\, a2\, a3\, a4\, a5 + 238812\, a1\, a2^2\, a3\, a4\, a5 +$
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$112614\, a1^2\, a2\, a3\, a5^2 + 112614\, a1\, a2^2\, a3\, a5^2 + 32919\, a2^3\, a3\, a5^2 + 53082\, a1^2\, a3^2\, a5^2 +$
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$2016\, a3\, a5^5 + 2016\, a4\, a5^5 + 210\, a5^6 + 2016\, a1^5\, a6 + 14028\, a1^4\, a2\, a6 + 32919\, a1^3\, a2^2\, a6 +$
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$238812\, a2\, a3^2\, a4\, a5\, a6 + 69884\, a3^3\, a4\, a5\, a6 + 112614\, a1^2\, a4^2\, a5\, a6 +$

$238\,812\ a1\ a2\ a4^2\ a5\ a6 + 112\,614\ a2^2\ a4^2\ a5\ a6 + 238\,812\ a1\ a3\ a4^2\ a5\ a6 +$
$238\,812\ a2\ a3\ a4^2\ a5\ a6 + 112\,614\ a3^2\ a4^2\ a5\ a6 + 69\,884\ a1\ a4^3\ a5\ a6 + 69\,884\ a2\ a4^3\ a5\ a6 +$
$69\,884\ a3\ a4^3\ a5\ a6 + 14\,028\ a4^4\ a5\ a6 + 32\,919\ a1^3\ a5^2\ a6 + 112\,614\ a1^2\ a2\ a5^2\ a6 +$
$112\,614\ a1\ a2^2\ a5^2\ a6 + 32\,919\ a2^3\ a5^2\ a6 + 112\,614\ a1^2\ a3\ a5^2\ a6 + 238\,812\ a1\ a2\ a3\ a5^2\ a6 +$
$112\,614\ a2^2\ a3\ a5^2\ a6 + 112\,614\ a1\ a3^2\ a5^2\ a6 + 112\,614\ a2\ a3^2\ a5^2\ a6 + 32\,919\ a3^3\ a5^2\ a6 +$
$112\,614\ a1^2\ a4\ a5^2\ a6 + 238\,812\ a1\ a2\ a4\ a5^2\ a6 + 112\,614\ a2^2\ a4\ a5^2\ a6 +$
$238\,812\ a1\ a3\ a4\ a5^2\ a6 + 238\,812\ a2\ a3\ a4\ a5^2\ a6 + 112\,614\ a3^2\ a4\ a5^2\ a6 +$
$112\,614\ a1\ a4^2\ a5^2\ a6 + 112\,614\ a2\ a4^2\ a5^2\ a6 + 112\,614\ a3\ a4^2\ a5^2\ a6 + 32\,919\ a4^3\ a5^2\ a6 +$
$32\,919\ a1^2\ a5^3\ a6 + 69\,884\ a1\ a2\ a5^3\ a6 + 32\,919\ a2^2\ a5^3\ a6 + 69\,884\ a1\ a3\ a5^3\ a6 +$
$69\,884\ a2\ a3\ a5^3\ a6 + 32\,919\ a3^2\ a5^3\ a6 + 69\,884\ a1\ a4\ a5^3\ a6 + 69\,884\ a2\ a4\ a5^3\ a6 +$
$69\,884\ a3\ a4\ a5^3\ a6 + 32\,919\ a4^2\ a5^3\ a6 + 14\,028\ a1\ a5^4\ a6 + 14\,028\ a2\ a5^4\ a6 +$
$14\,028\ a3\ a5^4\ a6 + 14\,028\ a4\ a5^4\ a6 + 2016\ a5^5\ a6 + 6594\ a1^4\ a6^2 + 32\,919\ a1^3\ a2\ a6^2 +$
$53\,082\ a1^2\ a2^2\ a6^2 + 32\,919\ a1\ a2^3\ a6^2 + 6594\ a2^4\ a6^2 + 32\,919\ a1^3\ a3\ a6^2 +$
$112\,614\ a1^2\ a2\ a3\ a6^2 + 112\,614\ a1\ a2^2\ a3\ a6^2 + 32\,919\ a2^3\ a3\ a6^2 + 53\,082\ a1^2\ a3^2\ a6^2 +$
$112\,614\ a1\ a2\ a3^2\ a6^2 + 53\,082\ a2^2\ a3^2\ a6^2 + 32\,919\ a1\ a3^3\ a6^2 + 32\,919\ a2\ a3^3\ a6^2 +$
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$32\,919\ a2^3\ a4\ a6^2 + 112\,614\ a1^2\ a3\ a4\ a6^2 + 238\,812\ a1\ a2\ a3\ a4\ a6^2 + 112\,614\ a2^2\ a3\ a4\ a6^2 +$
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$112\,614\ a1\ a2\ a4^2\ a6^2 + 53\,082\ a2^2\ a4^2\ a6^2 + 112\,614\ a1\ a3\ a4^2\ a6^2 + 112\,614\ a2\ a3\ a4^2\ a6^2 +$
$53\,082\ a3^2\ a4^2\ a6^2 + 32\,919\ a1\ a4^3\ a6^2 + 32\,919\ a2\ a4^3\ a6^2 + 32\,919\ a3\ a4^3\ a6^2 +$
$6594\ a4^4\ a6^2 + 32\,919\ a1^3\ a5\ a6^2 + 112\,614\ a1^2\ a2\ a5\ a6^2 + 112\,614\ a1\ a2^2\ a5\ a6^2 +$
$32\,919\ a2^3\ a5\ a6^2 + 112\,614\ a1^2\ a3\ a5\ a6^2 + 238\,812\ a1\ a2\ a3\ a5\ a6^2 + 112\,614\ a2^2\ a3\ a5\ a6^2 +$
$112\,614\ a1\ a3^2\ a5\ a6^2 + 112\,614\ a2\ a3^2\ a5\ a6^2 + 32\,919\ a3^3\ a5\ a6^2 + 112\,614\ a1^2\ a4\ a5\ a6^2 +$
$238\,812\ a1\ a2\ a4\ a5\ a6^2 + 112\,614\ a2^2\ a4\ a5\ a6^2 + 238\,812\ a1\ a3\ a4\ a5\ a6^2 +$
$238\,812\ a2\ a3\ a4\ a5\ a6^2 + 112\,614\ a3^2\ a4\ a5\ a6^2 + 112\,614\ a1\ a4^2\ a5\ a6^2 +$
$112\,614\ a2\ a4^2\ a5\ a6^2 + 112\,614\ a3\ a4^2\ a5\ a6^2 + 32\,919\ a4^3\ a5\ a6^2 + 53\,082\ a1^2\ a5^2\ a6^2 +$
$112\,614\ a1\ a2\ a5^2\ a6^2 + 53\,082\ a2^2\ a5^2\ a6^2 + 112\,614\ a1\ a3\ a5^2\ a6^2 + 112\,614\ a2\ a3\ a5^2\ a6^2 +$
$53\,082\ a3^2\ a5^2\ a6^2 + 112\,614\ a1\ a4\ a5^2\ a6^2 + 112\,614\ a2\ a4\ a5^2\ a6^2 + 112\,614\ a3\ a4\ a5^2\ a6^2 +$
$53\,082\ a4^2\ a5^2\ a6^2 + 32\,919\ a1\ a5^3\ a6^2 + 32\,919\ a2\ a5^3\ a6^2 + 32\,919\ a3\ a5^3\ a6^2 +$
$32\,919\ a4\ a5^3\ a6^2 + 6594\ a5^4\ a6^2 + 9596\ a1^3\ a6^3 + 32\,919\ a1^2\ a2\ a6^3 + 32\,919\ a1\ a2^2\ a6^3 +$
$9596\ a2^3\ a6^3 + 32\,919\ a1^2\ a3\ a6^3 + 69\,884\ a1\ a2\ a3\ a6^3 + 32\,919\ a2^2\ a3\ a6^3 +$
$32\,919\ a1\ a3^2\ a6^3 + 32\,919\ a2\ a3^2\ a6^3 + 9596\ a3^3\ a6^3 + 32\,919\ a1^2\ a4\ a6^3 +$
$69\,884\ a1\ a2\ a4\ a6^3 + 32\,919\ a2^2\ a4\ a6^3 + 69\,884\ a1\ a3\ a4\ a6^3 + 69\,884\ a2\ a3\ a4\ a6^3 +$
$32\,919\ a3^2\ a4\ a6^3 + 32\,919\ a1\ a4^2\ a6^3 + 32\,919\ a2\ a4^2\ a6^3 + 32\,919\ a3\ a4^2\ a6^3 +$
$9596\ a4^3\ a6^3 + 32\,919\ a1^2\ a5\ a6^3 + 69\,884\ a1\ a2\ a5\ a6^3 + 32\,919\ a2^2\ a5\ a6^3 +$
$69\,884\ a1\ a3\ a5\ a6^3 + 69\,884\ a2\ a3\ a5\ a6^3 + 32\,919\ a3^2\ a5\ a6^3 + 69\,884\ a1\ a4\ a5\ a6^3 +$
$69\,884\ a2\ a4\ a5\ a6^3 + 69\,884\ a3\ a4\ a5\ a6^3 + 32\,919\ a4^2\ a5\ a6^3 + 32\,919\ a1\ a5^2\ a6^3 +$
$32\,919\ a2\ a5^2\ a6^3 + 32\,919\ a3\ a5^2\ a6^3 + 32\,919\ a4\ a5^2\ a6^3 + 9596\ a5^3\ a6^3 +$
$6594\ a1^2\ a6^4 + 14\,028\ a1\ a2\ a6^4 + 6594\ a2^2\ a6^4 + 14\,028\ a1\ a3\ a6^4 + 14\,028\ a2\ a3\ a6^4 +$
$6594\ a3^2\ a6^4 + 14\,028\ a1\ a4\ a6^4 + 14\,028\ a2\ a4\ a6^4 + 14\,028\ a3\ a4\ a6^4 + 6594\ a4^2\ a6^4 +$
$14\,028\ a1\ a5\ a6^4 + 14\,028\ a2\ a5\ a6^4 + 14\,028\ a3\ a5\ a6^4 + 14\,028\ a4\ a5\ a6^4 + 6594\ a5^2\ a6^4 +$
$2016\ a1\ a6^5 + 2016\ a2\ a6^5 + 2016\ a3\ a6^5 + 2016\ a4\ a6^5 + 2016\ a5\ a6^5 + 210\ a6^6$

In[70]:=
```
H5 = SeriesCoefficient[%66, {t, 0, 5}]
```

Out[70]=

$252\ a1^5 + 1764\ a1^4\ a2 + 4152\ a1^3\ a2^2 + 4152\ a1^2\ a2^3 + 1764\ a1\ a2^4 + 252\ a2^5 +$
$1764\ a1^4\ a3 + 8832\ a1^3\ a2\ a3 + 14\,256\ a1^2\ a2^2\ a3 + 8832\ a1\ a2^3\ a3 + 1764\ a2^4\ a3 +$

$4152\, a1^3\, a3^2 + 14\,256\, a1^2\, a2\, a3^2 + 14\,256\, a1\, a2^2\, a3^2 + 4152\, a2^3\, a3^2 + 4152\, a1^2\, a3^3 +$
$8832\, a1\, a2\, a3^3 + 4152\, a2^2\, a3^3 + 1764\, a1\, a3^4 + 1764\, a2\, a3^4 + 252\, a3^5 + 1764\, a1^4\, a4 +$
$8832\, a1^3\, a2\, a4 + 14\,256\, a1^2\, a2^2\, a4 + 8832\, a1\, a2^3\, a4 + 1764\, a2^4\, a4 + 8832\, a1^3\, a3\, a4 +$
$30\,288\, a1^2\, a2\, a3\, a4 + 30\,288\, a1\, a2^2\, a3\, a4 + 8832\, a2^3\, a3\, a4 + 14\,256\, a1^2\, a3^2\, a4 +$
$30\,288\, a1\, a2\, a3^2\, a4 + 14\,256\, a2^2\, a3^2\, a4 + 8832\, a1\, a3^3\, a4 + 8832\, a2\, a3^3\, a4 + 1764\, a3^4\, a4 +$
$4152\, a1^3\, a4^2 + 14\,256\, a1^2\, a2\, a4^2 + 14\,256\, a1\, a2^2\, a4^2 + 4152\, a2^3\, a4^2 + 14\,256\, a1^2\, a3\, a4^2 +$
$30\,288\, a1\, a2\, a3\, a4^2 + 14\,256\, a2^2\, a3\, a4^2 + 14\,256\, a1\, a3^2\, a4^2 + 14\,256\, a2\, a3^2\, a4^2 +$
$4152\, a3^3\, a4^2 + 4152\, a1^2\, a4^3 + 8832\, a1\, a2\, a4^3 + 4152\, a2^2\, a4^3 + 8832\, a1\, a3\, a4^3 +$
$8832\, a2\, a3\, a4^3 + 4152\, a3^2\, a4^3 + 1764\, a1\, a4^4 + 1764\, a2\, a4^4 + 1764\, a3\, a4^4 + 252\, a4^5 +$
$1764\, a1^4\, a5 + 8832\, a1^3\, a2\, a5 + 14\,256\, a1^2\, a2^2\, a5 + 8832\, a1\, a2^3\, a5 + 1764\, a2^4\, a5 +$
$8832\, a1^3\, a3\, a5 + 30\,288\, a1^2\, a2\, a3\, a5 + 30\,288\, a1\, a2^2\, a3\, a5 + 8832\, a2^3\, a3\, a5 +$
$14\,256\, a1^2\, a3^2\, a5 + 30\,288\, a1\, a2\, a3^2\, a5 + 14\,256\, a2^2\, a3^2\, a5 + 8832\, a1\, a3^3\, a5 +$
$8832\, a2\, a3^3\, a5 + 1764\, a3^4\, a5 + 8832\, a1^3\, a4\, a5 + 30\,288\, a1^2\, a2\, a4\, a5 + 30\,288\, a1\, a2^2\, a4\, a5 +$
$8832\, a2^3\, a4\, a5 + 30\,288\, a1^2\, a3\, a4\, a5 + 64\,320\, a1\, a2\, a3\, a4\, a5 + 30\,288\, a2^2\, a3\, a4\, a5 +$
$30\,288\, a1\, a3^2\, a4\, a5 + 30\,288\, a2\, a3^2\, a4\, a5 + 8832\, a3^3\, a4\, a5 + 14\,256\, a1^2\, a4^2\, a5 +$
$30\,288\, a1\, a2\, a4^2\, a5 + 14\,256\, a2^2\, a4^2\, a5 + 30\,288\, a1\, a3\, a4^2\, a5 + 30\,288\, a2\, a3\, a4^2\, a5 +$
$14\,256\, a3^2\, a4^2\, a5 + 8832\, a1\, a4^3\, a5 + 8832\, a2\, a4^3\, a5 + 8832\, a3\, a4^3\, a5 + 1764\, a4^4\, a5 +$
$4152\, a1^3\, a5^2 + 14\,256\, a1^2\, a2\, a5^2 + 14\,256\, a1\, a2^2\, a5^2 + 4152\, a2^3\, a5^2 + 14\,256\, a1^2\, a3\, a5^2 +$
$30\,288\, a1\, a2\, a3\, a5^2 + 14\,256\, a2^2\, a3\, a5^2 + 14\,256\, a1\, a3^2\, a5^2 + 14\,256\, a2\, a3^2\, a5^2 +$
$4152\, a3^3\, a5^2 + 14\,256\, a1^2\, a4\, a5^2 + 30\,288\, a1\, a2\, a4\, a5^2 + 14\,256\, a2^2\, a4\, a5^2 +$
$30\,288\, a1\, a3\, a4\, a5^2 + 30\,288\, a2\, a3\, a4\, a5^2 + 14\,256\, a3^2\, a4\, a5^2 + 14\,256\, a1\, a4^2\, a5^2 +$
$14\,256\, a2\, a4^2\, a5^2 + 14\,256\, a3\, a4^2\, a5^2 + 4152\, a4^3\, a5^2 + 4152\, a1^2\, a5^3 + 8832\, a1\, a2\, a5^3 +$
$4152\, a2^2\, a5^3 + 8832\, a1\, a3\, a5^3 + 8832\, a2\, a3\, a5^3 + 4152\, a3^2\, a5^3 + 8832\, a1\, a4\, a5^3 +$
$8832\, a2\, a4\, a5^3 + 8832\, a3\, a4\, a5^3 + 4152\, a4^2\, a5^3 + 1764\, a1\, a5^4 + 1764\, a2\, a5^4 +$
$1764\, a3\, a5^4 + 1764\, a4\, a5^4 + 252\, a5^5 + 1764\, a1^4\, a6 + 8832\, a1^3\, a2\, a6 + 14\,256\, a1^2\, a2^2\, a6 +$
$8832\, a1\, a2^3\, a6 + 1764\, a2^4\, a6 + 8832\, a1^3\, a3\, a6 + 30\,288\, a1^2\, a2\, a3\, a6 + 30\,288\, a1\, a2^2\, a3\, a6 +$
$8832\, a2^3\, a3\, a6 + 14\,256\, a1^2\, a3^2\, a6 + 30\,288\, a1\, a2\, a3^2\, a6 + 14\,256\, a2^2\, a3^2\, a6 +$
$8832\, a1\, a3^3\, a6 + 8832\, a2\, a3^3\, a6 + 1764\, a3^4\, a6 + 8832\, a1^3\, a4\, a6 + 30\,288\, a1^2\, a2\, a4\, a6 +$
$30\,288\, a1\, a2^2\, a4\, a6 + 8832\, a2^3\, a4\, a6 + 30\,288\, a1^2\, a3\, a4\, a6 + 64\,320\, a1\, a2\, a3\, a4\, a6 +$
$30\,288\, a2^2\, a3\, a4\, a6 + 30\,288\, a1\, a3^2\, a4\, a6 + 30\,288\, a2\, a3^2\, a4\, a6 + 8832\, a3^3\, a4\, a6 +$
$14\,256\, a1^2\, a4^2\, a6 + 30\,288\, a1\, a2\, a4^2\, a6 + 14\,256\, a2^2\, a4^2\, a6 + 30\,288\, a1\, a3\, a4^2\, a6 +$
$30\,288\, a2\, a3\, a4^2\, a6 + 14\,256\, a3^2\, a4^2\, a6 + 8832\, a1\, a4^3\, a6 + 8832\, a2\, a4^3\, a6 + 8832\, a3\, a4^3\, a6 +$
$1764\, a4^4\, a6 + 8832\, a1^3\, a5\, a6 + 30\,288\, a1^2\, a2\, a5\, a6 + 30\,288\, a1\, a2^2\, a5\, a6 + 8832\, a2^3\, a5\, a6 +$
$30\,288\, a1^2\, a3\, a5\, a6 + 64\,320\, a1\, a2\, a3\, a5\, a6 + 30\,288\, a2^2\, a3\, a5\, a6 + 30\,288\, a1\, a3^2\, a5\, a6 +$
$30\,288\, a2\, a3^2\, a5\, a6 + 8832\, a3^3\, a5\, a6 + 30\,288\, a1^2\, a4\, a5\, a6 + 64\,320\, a1\, a2\, a4\, a5\, a6 +$
$30\,288\, a2^2\, a4\, a5\, a6 + 64\,320\, a1\, a3\, a4\, a5\, a6 + 64\,320\, a2\, a3\, a4\, a5\, a6 + 30\,288\, a3^2\, a4\, a5\, a6 +$
$30\,288\, a1\, a4^2\, a5\, a6 + 30\,288\, a2\, a4^2\, a5\, a6 + 30\,288\, a3\, a4^2\, a5\, a6 + 8832\, a4^3\, a5\, a6 +$
$14\,256\, a1^2\, a5^2\, a6 + 30\,288\, a1\, a2\, a5^2\, a6 + 14\,256\, a2^2\, a5^2\, a6 + 30\,288\, a1\, a3\, a5^2\, a6 +$
$30\,288\, a2\, a3\, a5^2\, a6 + 14\,256\, a3^2\, a5^2\, a6 + 30\,288\, a1\, a4\, a5^2\, a6 + 30\,288\, a2\, a4\, a5^2\, a6 +$
$30\,288\, a3\, a4\, a5^2\, a6 + 14\,256\, a4^2\, a5^2\, a6 + 8832\, a1\, a5^3\, a6 + 8832\, a2\, a5^3\, a6 +$
$8832\, a3\, a5^3\, a6 + 8832\, a4\, a5^3\, a6 + 1764\, a5^4\, a6 + 4152\, a1^3\, a6^2 + 14\,256\, a1^2\, a2\, a6^2 +$
$14\,256\, a1\, a2^2\, a6^2 + 4152\, a2^3\, a6^2 + 14\,256\, a1^2\, a3\, a6^2 + 30\,288\, a1\, a2\, a3\, a6^2 +$
$14\,256\, a2^2\, a3\, a6^2 + 14\,256\, a1\, a3^2\, a6^2 + 14\,256\, a2\, a3^2\, a6^2 + 4152\, a3^3\, a6^2 +$
$14\,256\, a1^2\, a4\, a6^2 + 30\,288\, a1\, a2\, a4\, a6^2 + 14\,256\, a2^2\, a4\, a6^2 + 30\,288\, a1\, a3\, a4\, a6^2 +$
$30\,288\, a2\, a3\, a4\, a6^2 + 14\,256\, a3^2\, a4\, a6^2 + 14\,256\, a1\, a4^2\, a6^2 + 14\,256\, a2\, a4^2\, a6^2 +$
$14\,256\, a3\, a4^2\, a6^2 + 4152\, a4^3\, a6^2 + 14\,256\, a1^2\, a5\, a6^2 + 30\,288\, a1\, a2\, a5\, a6^2 +$
$14\,256\, a2^2\, a5\, a6^2 + 30\,288\, a1\, a3\, a5\, a6^2 + 30\,288\, a2\, a3\, a5\, a6^2 + 14\,256\, a3^2\, a5\, a6^2 +$

$30\,288\ a1\ a4\ a5\ a6^2 + 30\,288\ a2\ a4\ a5\ a6^2 + 30\,288\ a3\ a4\ a5\ a6^2 + 14\,256\ a4^2\ a5\ a6^2 +$
$14\,256\ a1\ a5^2\ a6^2 + 14\,256\ a2\ a5^2\ a6^2 + 14\,256\ a3\ a5^2\ a6^2 + 14\,256\ a4\ a5^2\ a6^2 + 4152\ a5^3\ a6^2 +$
$4152\ a1^2\ a6^3 + 8832\ a1\ a2\ a6^3 + 4152\ a2^2\ a6^3 + 8832\ a1\ a3\ a6^3 + 8832\ a2\ a3\ a6^3 +$
$4152\ a3^2\ a6^3 + 8832\ a1\ a4\ a6^3 + 8832\ a2\ a4\ a6^3 + 8832\ a3\ a4\ a6^3 + 4152\ a4^2\ a6^3 +$
$8832\ a1\ a5\ a6^3 + 8832\ a2\ a5\ a6^3 + 8832\ a3\ a5\ a6^3 + 8832\ a4\ a5\ a6^3 + 4152\ a5^2\ a6^3 +$
$1764\ a1\ a6^4 + 1764\ a2\ a6^4 + 1764\ a3\ a6^4 + 1764\ a4\ a6^4 + 1764\ a5\ a6^4 + 252\ a6^5$

In[71]:=
```
H4 = SeriesCoefficient[%66, {t, 0, 4}]
```

Out[71]=

$210\ a1^4 + 1056\ a1^3\ a2 + 1707\ a1^2\ a2^2 + 1056\ a1\ a2^3 + 210\ a2^4 + 1056\ a1^3\ a3 + 3633\ a1^2\ a2\ a3 +$
$3633\ a1\ a2^2\ a3 + 1056\ a2^3\ a3 + 1707\ a1^2\ a3^2 + 3633\ a1\ a2\ a3^2 + 1707\ a2^2\ a3^2 +$
$1056\ a1\ a3^3 + 1056\ a2\ a3^3 + 210\ a3^4 + 1056\ a1^3\ a4 + 3633\ a1^2\ a2\ a4 + 3633\ a1\ a2^2\ a4 +$
$1056\ a2^3\ a4 + 3633\ a1^2\ a3\ a4 + 7728\ a1\ a2\ a3\ a4 + 3633\ a2^2\ a3\ a4 + 3633\ a1\ a3^2\ a4 +$
$3633\ a2\ a3^2\ a4 + 1056\ a3^3\ a4 + 1707\ a1^2\ a4^2 + 3633\ a1\ a2\ a4^2 + 1707\ a2^2\ a4^2 +$
$3633\ a1\ a3\ a4^2 + 3633\ a2\ a3\ a4^2 + 1707\ a3^2\ a4^2 + 1056\ a1\ a4^3 + 1056\ a2\ a4^3 +$
$1056\ a3\ a4^3 + 210\ a4^4 + 1056\ a1^3\ a5 + 3633\ a1^2\ a2\ a5 + 3633\ a1\ a2^2\ a5 + 1056\ a2^3\ a5 +$
$3633\ a1^2\ a3\ a5 + 7728\ a1\ a2\ a3\ a5 + 3633\ a2^2\ a3\ a5 + 3633\ a1\ a3^2\ a5 + 3633\ a2\ a3^2\ a5 +$
$1056\ a3^3\ a5 + 3633\ a1^2\ a4\ a5 + 7728\ a1\ a2\ a4\ a5 + 3633\ a2^2\ a4\ a5 + 7728\ a1\ a3\ a4\ a5 +$
$7728\ a2\ a3\ a4\ a5 + 3633\ a3^2\ a4\ a5 + 3633\ a1\ a4^2\ a5 + 3633\ a2\ a4^2\ a5 + 3633\ a3\ a4^2\ a5 +$
$1056\ a4^3\ a5 + 1707\ a1^2\ a5^2 + 3633\ a1\ a2\ a5^2 + 1707\ a2^2\ a5^2 + 3633\ a1\ a3\ a5^2 +$
$3633\ a2\ a3\ a5^2 + 1707\ a3^2\ a5^2 + 3633\ a1\ a4\ a5^2 + 3633\ a2\ a4\ a5^2 + 3633\ a3\ a4\ a5^2 +$
$1707\ a4^2\ a5^2 + 1056\ a1\ a5^3 + 1056\ a2\ a5^3 + 1056\ a3\ a5^3 + 1056\ a4\ a5^3 + 210\ a5^4 +$
$1056\ a1^3\ a6 + 3633\ a1^2\ a2\ a6 + 3633\ a1\ a2^2\ a6 + 1056\ a2^3\ a6 + 3633\ a1^2\ a3\ a6 +$
$7728\ a1\ a2\ a3\ a6 + 3633\ a2^2\ a3\ a6 + 3633\ a1\ a3^2\ a6 + 3633\ a2\ a3^2\ a6 + 1056\ a3^3\ a6 +$
$3633\ a1^2\ a4\ a6 + 7728\ a1\ a2\ a4\ a6 + 3633\ a2^2\ a4\ a6 + 7728\ a1\ a3\ a4\ a6 + 7728\ a2\ a3\ a4\ a6 +$
$3633\ a3^2\ a4\ a6 + 3633\ a1\ a4^2\ a6 + 3633\ a2\ a4^2\ a6 + 3633\ a3\ a4^2\ a6 + 1056\ a4^3\ a6 +$
$3633\ a1^2\ a5\ a6 + 7728\ a1\ a2\ a5\ a6 + 3633\ a2^2\ a5\ a6 + 7728\ a1\ a3\ a5\ a6 + 7728\ a2\ a3\ a5\ a6 +$
$3633\ a3^2\ a5\ a6 + 7728\ a1\ a4\ a5\ a6 + 7728\ a2\ a4\ a5\ a6 + 7728\ a3\ a4\ a5\ a6 + 3633\ a4^2\ a5\ a6 +$
$3633\ a1\ a5^2\ a6 + 3633\ a2\ a5^2\ a6 + 3633\ a3\ a5^2\ a6 + 3633\ a4\ a5^2\ a6 + 1056\ a5^3\ a6 +$
$1707\ a1^2\ a6^2 + 3633\ a1\ a2\ a6^2 + 1707\ a2^2\ a6^2 + 3633\ a1\ a3\ a6^2 + 3633\ a2\ a3\ a6^2 +$
$1707\ a3^2\ a6^2 + 3633\ a1\ a4\ a6^2 + 3633\ a2\ a4\ a6^2 + 3633\ a3\ a4\ a6^2 + 1707\ a4^2\ a6^2 +$
$3633\ a1\ a5\ a6^2 + 3633\ a2\ a5\ a6^2 + 3633\ a3\ a5\ a6^2 + 3633\ a4\ a5\ a6^2 + 1707\ a5^2\ a6^2 +$
$1056\ a1\ a6^3 + 1056\ a2\ a6^3 + 1056\ a3\ a6^3 + 1056\ a4\ a6^3 + 1056\ a5\ a6^3 + 210\ a6^4$

In[72]:=
```
H3 = SeriesCoefficient[%66, {t, 0, 3}]
```

Out[72]=

$120\ a1^3 + 414\ a1^2\ a2 + 414\ a1\ a2^2 + 120\ a2^3 + 414\ a1^2\ a3 + 882\ a1\ a2\ a3 + 414\ a2^2\ a3 +$
$414\ a1\ a3^2 + 414\ a2\ a3^2 + 120\ a3^3 + 414\ a1^2\ a4 + 882\ a1\ a2\ a4 + 414\ a2^2\ a4 +$
$882\ a1\ a3\ a4 + 882\ a2\ a3\ a4 + 414\ a3^2\ a4 + 414\ a1\ a4^2 + 414\ a2\ a4^2 + 414\ a3\ a4^2 +$
$120\ a4^3 + 414\ a1^2\ a5 + 882\ a1\ a2\ a5 + 414\ a2^2\ a5 + 882\ a1\ a3\ a5 + 882\ a2\ a3\ a5 +$
$414\ a3^2\ a5 + 882\ a1\ a4\ a5 + 882\ a2\ a4\ a5 + 882\ a3\ a4\ a5 + 414\ a4^2\ a5 + 414\ a1\ a5^2 +$
$414\ a2\ a5^2 + 414\ a3\ a5^2 + 414\ a4\ a5^2 + 120\ a5^3 + 414\ a1^2\ a6 + 882\ a1\ a2\ a6 +$
$414\ a2^2\ a6 + 882\ a1\ a3\ a6 + 882\ a2\ a3\ a6 + 414\ a3^2\ a6 + 882\ a1\ a4\ a6 + 882\ a2\ a4\ a6 +$
$882\ a3\ a4\ a6 + 414\ a4^2\ a6 + 882\ a1\ a5\ a6 + 882\ a2\ a5\ a6 + 882\ a3\ a5\ a6 + 882\ a4\ a5\ a6 +$
$414\ a5^2\ a6 + 414\ a1\ a6^2 + 414\ a2\ a6^2 + 414\ a3\ a6^2 + 414\ a4\ a6^2 + 414\ a5\ a6^2 + 120\ a6^3$

In[73]:=
```
H2 = SeriesCoefficient[%66, {t, 0, 2}]
```
Out[73]=

$$45\,a1^2 + 96\,a1\,a2 + 45\,a2^2 + 96\,a1\,a3 + 96\,a2\,a3 + 45\,a3^2 + 96\,a1\,a4 + 96\,a2\,a4 + 96\,a3\,a4 + 45\,a4^2 + 96\,a1\,a5 + 96\,a2\,a5 + 96\,a3\,a5 + 96\,a4\,a5 + 45\,a5^2 + 96\,a1\,a6 + 96\,a2\,a6 + 96\,a3\,a6 + 96\,a4\,a6 + 96\,a5\,a6 + 45\,a6^2$$

In[74]:=
```
H1 = SeriesCoefficient[%66, {t, 0, 1}]
```
Out[74]=

$$10\,(a1 + a2 + a3 + a4 + a5 + a6)$$

In[75]:=
```
SymmetricReduction[H8, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[75]=

$$\{45\,f1^8 + 504\,f1^6\,f2 + 1050\,f1^4\,f2^2 + 420\,f1^2\,f2^3 + 15\,f2^4 + 210\,f1^5\,f3 + 315\,f1^3\,f2\,f3 + 30\,f1\,f2^2\,f3 - 60\,f1^2\,f3^2 - 12\,f2\,f3^2 - 441\,f1^4\,f4 - 465\,f1^2\,f2\,f4 - 28\,f2^2\,f4 - 13\,f1\,f3\,f4 + f4^2 - 234\,f1^3\,f5 - 47\,f1\,f2\,f5 + 36\,f3\,f5 + 1444\,f1^2\,f6 + 138\,f2\,f6,\ 0\}$$

In[76]:=
```
m8 = First[%75]
```
Out[76]=

$$45\,f1^8 + 504\,f1^6\,f2 + 1050\,f1^4\,f2^2 + 420\,f1^2\,f2^3 + 15\,f2^4 + 210\,f1^5\,f3 + 315\,f1^3\,f2\,f3 + 30\,f1\,f2^2\,f3 - 60\,f1^2\,f3^2 - 12\,f2\,f3^2 - 441\,f1^4\,f4 - 465\,f1^2\,f2\,f4 - 28\,f2^2\,f4 - 13\,f1\,f3\,f4 + f4^2 - 234\,f1^3\,f5 - 47\,f1\,f2\,f5 + 36\,f3\,f5 + 1444\,f1^2\,f6 + 138\,f2\,f6$$

In[77]:=
```
SymmetricReduction[H7, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[77]=

$$\{120\,f1^7 + 756\,f1^5\,f2 + 840\,f1^3\,f2^2 + 140\,f1\,f2^3 + 168\,f1^4\,f3 + 105\,f1^2\,f2\,f3 - 21\,f1\,f3^2 - 343\,f1^3\,f4 - 154\,f1\,f2\,f4 - 77\,f1^2\,f5 + 462\,f1\,f6,\ 0\}$$

In[78]:=
```
m7 = First[%77]
```
Out[78]=

$$120\,f1^7 + 756\,f1^5\,f2 + 840\,f1^3\,f2^2 + 140\,f1\,f2^3 + 168\,f1^4\,f3 + 105\,f1^2\,f2\,f3 - 21\,f1\,f3^2 - 343\,f1^3\,f4 - 154\,f1\,f2\,f4 - 77\,f1^2\,f5 + 462\,f1\,f6$$

In[79]:=
```
SymmetricReduction[H6, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[79]=

$$\{210\,f1^6 + 756\,f1^4\,f2 + 420\,f1^2\,f2^2 + 20\,f2^3 + 84\,f1^3\,f3 + 15\,f1\,f2\,f3 - 3\,f3^2 - 169\,f1^2\,f4 - 22\,f2\,f4 - 11\,f1\,f5 + 66\,f6,\ 0\}$$

In[80]:=
```
m6 = First[%79]
```
Out[80]=

$$210\,f1^6 + 756\,f1^4\,f2 + 420\,f1^2\,f2^2 + 20\,f2^3 + 84\,f1^3\,f3 + 15\,f1\,f2\,f3 - 3\,f3^2 - 169\,f1^2\,f4 - 22\,f2\,f4 - 11\,f1\,f5 + 66\,f6$$

In[81]:=
```
SymmetricReduction[H5, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[81]=

$$\{252\,f1^5 + 504\,f1^3\,f2 + 120\,f1\,f2^2 + 24\,f1^2\,f3 - 48\,f1\,f4,\ 0\}$$

In[82]:=
```
m5 = First[%81]
```
Out[82]=

$$252\,f1^5 + 504\,f1^3\,f2 + 120\,f1\,f2^2 + 24\,f1^2\,f3 - 48\,f1\,f4$$

In[83]:=
```
SymmetricReduction[H4, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[83]=
$$\{210\, f1^4 + 216\, f1^2\, f2 + 15\, f2^2 + 3\, f1\, f3 - 6\, f4,\ 0\}$$

In[84]:=
```
m4 = First[%83]
```
Out[84]=
$$210\, f1^4 + 216\, f1^2\, f2 + 15\, f2^2 + 3\, f1\, f3 - 6\, f4$$

In[85]:=
```
SymmetricReduction[H3, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[85]=
$$\{120\, f1^3 + 54\, f1\, f2,\ 0\}$$

In[86]:=
```
m3 = First[%85]
```
Out[86]=
$$120\, f1^3 + 54\, f1\, f2$$

In[87]:=
```
SymmetricReduction[H2, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[87]=
$$\{45\, f1^2 + 6\, f2,\ 0\}$$

In[88]:=
```
m2 = First[%87]
```
Out[88]=
$$45\, f1^2 + 6\, f2$$

In[89]:=
```
SymmetricReduction[H1, {a1, a2, a3, a4, a5, a6}, {f1, f2, f3, f4, f5, f6}]
```
Out[89]=
$$\{10\, f1,\ 0\}$$

In[90]:=
```
m1 = First[%89]
```
Out[90]=
$$10\, f1$$

In[91]:=
```
AugmentedSymmetricPolynomial[{8}, {a, b, c, d, e, f, g, h}]
```
Out[91]=
$$a^8 + b^8 + c^8 + d^8 + e^8 + f^8 + g^8 + h^8$$

In[92]:=
```
SymmetricReduction[%91, {a, b, c, d, e, f, g, h}, {d1, d2, d3, d4, d5, d6, d7, d8}]
```
Out[92]=
$$\{d1^8 - 8\, d1^6\, d2 + 20\, d1^4\, d2^2 - 16\, d1^2\, d2^3 + 2\, d2^4 + 8\, d1^5\, d3 - 32\, d1^3\, d2\, d3 + 24\, d1\, d2^2\, d3 + 12\, d1^2\, d3^2 - 8\, d2\, d3^2 - 8\, d1^4\, d4 + 24\, d1^2\, d2\, d4 - 8\, d2^2\, d4 - 16\, d1\, d3\, d4 + 4\, d4^2 + 8\, d1^3\, d5 - 16\, d1\, d2\, d5 + 8\, d3\, d5 - 8\, d1^2\, d6 + 8\, d2\, d6 + 8\, d1\, d7 - 8\, d8,\ 0\}$$

In[93]:=
```
s8 = First[%92]
```
Out[93]=
$$d1^8 - 8\, d1^6\, d2 + 20\, d1^4\, d2^2 - 16\, d1^2\, d2^3 + 2\, d2^4 + 8\, d1^5\, d3 - 32\, d1^3\, d2\, d3 + 24\, d1\, d2^2\, d3 + 12\, d1^2\, d3^2 - 8\, d2\, d3^2 - 8\, d1^4\, d4 + 24\, d1^2\, d2\, d4 - 8\, d2^2\, d4 - 16\, d1\, d3\, d4 + 4\, d4^2 + 8\, d1^3\, d5 - 16\, d1\, d2\, d5 + 8\, d3\, d5 - 8\, d1^2\, d6 + 8\, d2\, d6 + 8\, d1\, d7 - 8\, d8$$

In[94]:=
```
AugmentedSymmetricPolynomial[{7}, {a, b, c, d, e, f, g, h}]
```
Out[94]=
$$a^7 + b^7 + c^7 + d^7 + e^7 + f^7 + g^7 + h^7$$

In[95]:=
```
SymmetricReduction[%94, {a, b, c, d, e, f, g, h}, {d1, d2, d3, d4, d5, d6, d7, d8}]
```
Out[95]=

$$\{d1^7 - 7\,d1^5\,d2 + 14\,d1^3\,d2^2 - 7\,d1\,d2^3 + 7\,d1^4\,d3 - 21\,d1^2\,d2\,d3 + 7\,d2^2\,d3 + 7\,d1\,d3^2 - 7\,d1^3\,d4 + 14\,d1\,d2\,d4 - 7\,d3\,d4 + 7\,d1^2\,d5 - 7\,d2\,d5 - 7\,d1\,d6 + 7\,d7,\ 0\}$$

In[96]:=
```
s7 = First[%95]
```
Out[96]=

$$d1^7 - 7\,d1^5\,d2 + 14\,d1^3\,d2^2 - 7\,d1\,d2^3 + 7\,d1^4\,d3 - 21\,d1^2\,d2\,d3 + 7\,d2^2\,d3 + 7\,d1\,d3^2 - 7\,d1^3\,d4 + 14\,d1\,d2\,d4 - 7\,d3\,d4 + 7\,d1^2\,d5 - 7\,d2\,d5 - 7\,d1\,d6 + 7\,d7$$

In[97]:=
```
AugmentedSymmetricPolynomial[{6}, {a, b, c, d, e, f, g, h}]
```
Out[97]=

$$a^6 + b^6 + c^6 + d^6 + e^6 + f^6 + g^6 + h^6$$

In[98]:=
```
SymmetricReduction[%97, {a, b, c, d, e, f, g, h}, {d1, d2, d3, d4, d5, d6, d7, d8}]
```
Out[98]=

$$\{d1^6 - 6\,d1^4\,d2 + 9\,d1^2\,d2^2 - 2\,d2^3 + 6\,d1^3\,d3 - 12\,d1\,d2\,d3 + 3\,d3^2 - 6\,d1^2\,d4 + 6\,d2\,d4 + 6\,d1\,d5 - 6\,d6,\ 0\}$$

In[99]:=
```
s6 = First[%98]
```
Out[99]=

$$d1^6 - 6\,d1^4\,d2 + 9\,d1^2\,d2^2 - 2\,d2^3 + 6\,d1^3\,d3 - 12\,d1\,d2\,d3 + 3\,d3^2 - 6\,d1^2\,d4 + 6\,d2\,d4 + 6\,d1\,d5 - 6\,d6$$

In[100]:=
```
AugmentedSymmetricPolynomial[{5}, {a, b, c, d, e, f, g, h}]
```
Out[100]=

$$a^5 + b^5 + c^5 + d^5 + e^5 + f^5 + g^5 + h^5$$

In[101]:=
```
SymmetricReduction[%100, {a, b, c, d, e, f, g, h}, {d1, d2, d3, d4, d5, d6, d7, d8}]
```
Out[101]=

$$\{d1^5 - 5\,d1^3\,d2 + 5\,d1\,d2^2 + 5\,d1^2\,d3 - 5\,d2\,d3 - 5\,d1\,d4 + 5\,d5,\ 0\}$$

In[102]:=
```
s5 = First[%101]
```
Out[102]=

$$d1^5 - 5\,d1^3\,d2 + 5\,d1\,d2^2 + 5\,d1^2\,d3 - 5\,d2\,d3 - 5\,d1\,d4 + 5\,d5$$

In[103]:=

```
ch15 =
 15 + d1 * t + (1 / 2) * (d1 ^ 2 - 2 * d2) * t ^ 2 + (1 / 6) * (d1 ^ 3 - 3 * d1 * d2 + 3 * d3) * t ^ 3 +
  (1 / 24) * (d1 ^ 4 - 4 * d1 ^ 2 * d2 + 4 * d1 * d3 + 2 * d2 ^ 2 - 4 * d4) * t ^ 4 +
  (1 / 120) * s5 * t ^ 5 + (1 / 720) * s6 * t ^ 6 + (1 / 5040) * s7 * t ^ 7 + (1 / 40 320) * s8 * t ^ 8
```

Out[103]=

$$15 + d1\, t + \frac{1}{2}\left(d1^2 - 2\, d2\right) t^2 + \frac{1}{6}\left(d1^3 - 3\, d1\, d2 + 3\, d3\right) t^3 + \frac{1}{24}\left(d1^4 - 4\, d1^2\, d2 + 2\, d2^2 + 4\, d1\, d3 - 4\, d4\right) t^4 + \frac{1}{120}\left(d1^5 - 5\, d1^3\, d2 + 5\, d1\, d2^2 + 5\, d1^2\, d3 - 5\, d2\, d3 - 5\, d1\, d4 + 5\, d5\right) t^5 + \frac{1}{720}\left(d1^6 - 6\, d1^4\, d2 + 9\, d1^2\, d2^2 - 2\, d2^3 + 6\, d1^3\, d3 - 12\, d1\, d2\, d3 + 3\, d3^2 - 6\, d1^2\, d4 + 6\, d2\, d4 + 6\, d1\, d5 - 6\, d6\right) t^6 + \frac{1}{5040}\left(d1^7 - 7\, d1^5\, d2 + 14\, d1^3\, d2^2 - 7\, d1\, d2^3 + 7\, d1^4\, d3 - 21\, d1^2\, d2\, d3 + 7\, d2^2\, d3 + 7\, d1\, d3^2 - 7\, d1^3\, d4 + 14\, d1\, d2\, d4 - 7\, d3\, d4 + 7\, d1^2\, d5 - 7\, d2\, d5 - 7\, d1\, d6 + 7\, d7\right) t^7 + \frac{1}{40\,320}\left(d1^8 - 8\, d1^6\, d2 + 20\, d1^4\, d2^2 - 16\, d1^2\, d2^3 + 2\, d2^4 + 8\, d1^5\, d3 - 32\, d1^3\, d2\, d3 + 24\, d1\, d2^2\, d3 + 12\, d1^2\, d3^2 - 8\, d2\, d3^2 - 8\, d1^4\, d4 + 24\, d1^2\, d2\, d4 - 8\, d2^2\, d4 - 16\, d1\, d3\, d4 + 4\, d4^2 + 8\, d1^3\, d5 - 16\, d1\, d2\, d5 + 8\, d3\, d5 - 8\, d1^2\, d6 + 8\, d2\, d6 + 8\, d1\, d7 - 8\, d8\right) t^8$$

In[104]:=

```
ch20 =
 20 + d1 * t + (1 / 2) * (d1 ^ 2 - 2 * d2) * t ^ 2 + (1 / 6) * (d1 ^ 3 - 3 * d1 * d2 + 3 * d3) * t ^ 3 +
  (1 / 24) * (d1 ^ 4 - 4 * d1 ^ 2 * d2 + 4 * d1 * d3 + 2 * d2 ^ 2 - 4 * d4) * t ^ 4 +
  (1 / 120) * s5 * t ^ 5 + (1 / 720) * s6 * t ^ 6 + (1 / 5040) * s7 * t ^ 7 + (1 / 40 320) * s8 * t ^ 8
```

Out[104]=

$$20 + d1\, t + \frac{1}{2}\left(d1^2 - 2\, d2\right) t^2 + \frac{1}{6}\left(d1^3 - 3\, d1\, d2 + 3\, d3\right) t^3 + \frac{1}{24}\left(d1^4 - 4\, d1^2\, d2 + 2\, d2^2 + 4\, d1\, d3 - 4\, d4\right) t^4 + \frac{1}{120}\left(d1^5 - 5\, d1^3\, d2 + 5\, d1\, d2^2 + 5\, d1^2\, d3 - 5\, d2\, d3 - 5\, d1\, d4 + 5\, d5\right) t^5 + \frac{1}{720}\left(d1^6 - 6\, d1^4\, d2 + 9\, d1^2\, d2^2 - 2\, d2^3 + 6\, d1^3\, d3 - 12\, d1\, d2\, d3 + 3\, d3^2 - 6\, d1^2\, d4 + 6\, d2\, d4 + 6\, d1\, d5 - 6\, d6\right) t^6 + \frac{1}{5040}\left(d1^7 - 7\, d1^5\, d2 + 14\, d1^3\, d2^2 - 7\, d1\, d2^3 + 7\, d1^4\, d3 - 21\, d1^2\, d2\, d3 + 7\, d2^2\, d3 + 7\, d1\, d3^2 - 7\, d1^3\, d4 + 14\, d1\, d2\, d4 - 7\, d3\, d4 + 7\, d1^2\, d5 - 7\, d2\, d5 - 7\, d1\, d6 + 7\, d7\right) t^7 + \frac{1}{40\,320}\left(d1^8 - 8\, d1^6\, d2 + 20\, d1^4\, d2^2 - 16\, d1^2\, d2^3 + 2\, d2^4 + 8\, d1^5\, d3 - 32\, d1^3\, d2\, d3 + 24\, d1\, d2^2\, d3 + 12\, d1^2\, d3^2 - 8\, d2\, d3^2 - 8\, d1^4\, d4 + 24\, d1^2\, d2\, d4 - 8\, d2^2\, d4 - 16\, d1\, d3\, d4 + 4\, d4^2 + 8\, d1^3\, d5 - 16\, d1\, d2\, d5 + 8\, d3\, d5 - 8\, d1^2\, d6 + 8\, d2\, d6 + 8\, d1\, d7 - 8\, d8\right) t^8$$

In[105]:=

```
Expand[ch15 * td]
```

Out[105]=

$$15 + \frac{15\,c1\,t}{2} + d1\,t + \frac{5\,c1^2\,t^2}{4} + \frac{5\,c2\,t^2}{4} + \frac{1}{2}\,c1\,d1\,t^2 + \frac{d1^2\,t^2}{2} - d2\,t^2 + \cdots 5668 \cdots + \frac{c1^3\,c5\,d8\,t^{16}}{2\,612\,736\,000} + \frac{c1\,c2\,c5\,d8\,t^{16}}{1\,143\,072\,000} - \frac{c3\,c5\,d8\,t^{16}}{6\,096\,384\,000} - \frac{c1^2\,c6\,d8\,t^{16}}{2\,612\,736\,000} - \frac{13\,c2\,c6\,d8\,t^{16}}{18\,289\,152\,000} - \frac{c1\,c7\,d8\,t^{16}}{6\,096\,384\,000} + \frac{c8\,d8\,t^{16}}{6\,096\,384\,000}$$

Size in memory: 1.2 MB | + Show more | Show all | Iconize | Store full expression in notebook

In[106]:=

```
SeriesCoefficient[%105, {t, 0, 8}]
```

Out[106]=

$$-\frac{c1^8}{80\,640} + \frac{c1^6\,c2}{10\,080} - \frac{5\,c1^4\,c2^2}{24\,192} + \frac{c1^2\,c2^3}{30\,240} + \frac{c2^4}{11\,520} - \frac{c1^5\,c3}{17\,280} + \frac{13\,c1^3\,c2\,c3}{120\,960} + \frac{5\,c1\,c2^2\,c3}{24\,192} +$$
$$\frac{c1^2\,c3^2}{80\,640} - \frac{c2\,c3^2}{30\,240} + \frac{c1^4\,c4}{17\,280} - \frac{19\,c1^2\,c2\,c4}{241\,920} - \frac{17\,c2^2\,c4}{120\,960} - \frac{13\,c1\,c3\,c4}{241\,920} + \frac{c4^2}{48\,384} - \frac{c1^3\,c5}{34\,560} -$$
$$\frac{c1\,c2\,c5}{15\,120} + \frac{c3\,c5}{80\,640} + \frac{c1^2\,c6}{34\,560} + \frac{13\,c2\,c6}{241\,920} + \frac{c1\,c7}{80\,640} - \frac{c8}{80\,640} + \frac{c1^5\,c2\,d1}{60\,480} - \frac{c1^3\,c2^2\,d1}{12\,096} +$$
$$\frac{c1\,c2^3\,d1}{12\,096} - \frac{c1^4\,c3\,d1}{60\,480} + \frac{11\,c1^2\,c2\,c3\,d1}{120\,960} - \frac{c1\,c3^2\,d1}{120\,960} + \frac{c1^3\,c4\,d1}{60\,480} - \frac{c1\,c2\,c4\,d1}{13\,440} -$$
$$\frac{c1^2\,c5\,d1}{60\,480} + \frac{c1\,c6\,d1}{60\,480} + \frac{c1^6\,d1^2}{60\,480} - \frac{c1^4\,c2\,d1^2}{10\,080} + \frac{11\,c1^2\,c2^2\,d1^2}{120\,960} + \frac{c2^3\,d1^2}{12\,096} + \frac{c1^3\,c3\,d1^2}{24\,192} +$$
$$\frac{11\,c1\,c2\,c3\,d1^2}{120\,960} - \frac{c3^2\,d1^2}{120\,960} - \frac{c1^2\,c4\,d1^2}{24\,192} - \frac{c2\,c4\,d1^2}{13\,440} - \frac{c1\,c5\,d1^2}{60\,480} + \frac{c6\,d1^2}{60\,480} - \frac{c1^3\,c2\,d1^3}{8640} +$$
$$\frac{c1\,c2^2\,d1^3}{2880} + \frac{c1^2\,c3\,d1^3}{8640} - \frac{c1\,c4\,d1^3}{8640} - \frac{c1^4\,d1^4}{17\,280} + \frac{c1^2\,c2\,d1^4}{4320} + \frac{c2^2\,d1^4}{5760} + \frac{c1\,c3\,d1^4}{17\,280} -$$
$$\frac{c4\,d1^4}{17\,280} + \frac{c1\,c2\,d1^5}{2880} + \frac{c1^2\,d1^6}{8640} + \frac{c2\,d1^6}{8640} + \frac{c1\,d1^7}{10\,080} + \frac{d1^8}{40\,320} - \frac{c1^6\,d2}{30\,240} + \frac{c1^4\,c2\,d2}{5040} -$$
$$\frac{11\,c1^2\,c2^2\,d2}{60\,480} - \frac{c2^3\,d2}{6048} - \frac{c1^3\,c3\,d2}{12\,096} - \frac{11\,c1\,c2\,c3\,d2}{60\,480} + \frac{c3^2\,d2}{60\,480} + \frac{c1^2\,c4\,d2}{12\,096} + \frac{c2\,c4\,d2}{6720} +$$
$$\frac{c1\,c5\,d2}{30\,240} - \frac{c6\,d2}{30\,240} + \frac{c1^3\,c2\,d1\,d2}{2880} - \frac{1}{960}\,c1\,c2^2\,d1\,d2 - \frac{c1^2\,c3\,d1\,d2}{2880} + \frac{c1\,c4\,d1\,d2}{2880} +$$
$$\frac{c1^4\,d1^2\,d2}{4320} - \frac{c1^2\,c2\,d1^2\,d2}{1080} - \frac{c2^2\,d1^2\,d2}{1440} - \frac{c1\,c3\,d1^2\,d2}{4320} + \frac{c4\,d1^2\,d2}{4320} - \frac{1}{576}\,c1\,c2\,d1^3\,d2 -$$
$$\frac{c1^2\,d1^4\,d2}{1440} - \frac{c2\,d1^4\,d2}{1440} - \frac{c1\,d1^5\,d2}{1440} - \frac{d1^6\,d2}{5040} - \frac{c1^4\,d2^2}{8640} + \frac{c1^2\,c2\,d2^2}{2160} + \frac{c2^2\,d2^2}{2880} + \frac{c1\,c3\,d2^2}{8640} -$$
$$\frac{c4\,d2^2}{8640} + \frac{1}{576}\,c1\,c2\,d1\,d2^2 + \frac{1}{960}\,c1^2\,d1^2\,d2^2 + \frac{1}{960}\,c2\,d1^2\,d2^2 + \frac{1}{720}\,c1\,d1^3\,d2^2 +$$
$$\frac{d1^4\,d2^2}{2016} - \frac{c1^2\,d2^3}{4320} - \frac{c2\,d2^3}{4320} - \frac{c1\,d1\,d2^3}{1440} - \frac{d1^2\,d2^3}{2520} + \frac{d2^4}{20\,160} - \frac{c1^3\,c2\,d3}{2880} + \frac{1}{960}\,c1\,c2^2\,d3 +$$
$$\frac{c1^2\,c3\,d3}{2880} - \frac{c1\,c4\,d3}{2880} - \frac{c1^4\,d1\,d3}{4320} + \frac{c1^2\,c2\,d1\,d3}{1080} + \frac{c2^2\,d1\,d3}{1440} + \frac{c1\,c3\,d1\,d3}{4320} - \frac{c4\,d1\,d3}{4320} +$$
$$\frac{1}{576}\,c1\,c2\,d1^2\,d3 + \frac{c1^2\,d1^3\,d3}{1440} + \frac{c2\,d1^3\,d3}{1440} + \frac{c1\,d1^4\,d3}{1440} + \frac{d1^5\,d3}{5040} - \frac{1}{576}\,c1\,c2\,d2\,d3 -$$
$$\frac{1}{720}\,c1^2\,d1\,d2\,d3 - \frac{1}{720}\,c2\,d1\,d2\,d3 - \frac{1}{480}\,c1\,d1^2\,d2\,d3 - \frac{d1^3\,d2\,d3}{1260} + \frac{c1\,d2^2\,d3}{1440} +$$

$$\frac{d1\,d2^2\,d3}{1680}+\frac{c1^2\,d3^2}{2880}+\frac{c2\,d3^2}{2880}+\frac{c1\,d1\,d3^2}{1440}+\frac{d1^2\,d3^2}{3360}-\frac{d2\,d3^2}{5040}+\frac{c1^4\,d4}{4320}-\frac{c1^2\,c2\,d4}{1080}-$$
$$\frac{c2^2\,d4}{1440}-\frac{c1\,c3\,d4}{4320}+\frac{c4\,d4}{4320}-\frac{1}{576}\,c1\,c2\,d1\,d4-\frac{c1^2\,d1^2\,d4}{1440}-\frac{c2\,d1^2\,d4}{1440}-\frac{c1\,d1^3\,d4}{1440}-$$
$$\frac{d1^4\,d4}{5040}+\frac{c1^2\,d2\,d4}{1440}+\frac{c2\,d2\,d4}{1440}+\frac{1}{720}\,c1\,d1\,d2\,d4+\frac{d1^2\,d2\,d4}{1680}-\frac{d2^2\,d4}{5040}-\frac{c1\,d3\,d4}{1440}-$$
$$\frac{d1\,d3\,d4}{2520}+\frac{d4^2}{10\,080}+\frac{c1\,c2\,d5}{576}+\frac{c1^2\,d1\,d5}{1440}+\frac{c2\,d1\,d5}{1440}+\frac{c1\,d1^2\,d5}{1440}+\frac{d1^3\,d5}{5040}-\frac{c1\,d2\,d5}{1440}-$$
$$\frac{d1\,d2\,d5}{2520}+\frac{d3\,d5}{5040}-\frac{c1^2\,d6}{1440}-\frac{c2\,d6}{1440}-\frac{c1\,d1\,d6}{1440}-\frac{d1^2\,d6}{5040}+\frac{d2\,d6}{5040}+\frac{c1\,d7}{1440}+\frac{d1\,d7}{5040}-\frac{d8}{5040}$$

In[107]:=

```
Expand[ch20 * td]
```

Out[107]=

$$20+10\,c1\,t+d1\,t+\frac{5\,c1^2\,t^2}{3}+\frac{5\,c2\,t^2}{3}+\frac{1}{2}\,c1\,d1\,t^2+\frac{d1^2\,t^2}{2}-d2\,t^2+\cdots 5668\cdots+$$
$$\frac{c1^3\,c5\,d8\,t^{16}}{2\,612\,736\,000}+\frac{c1\,c2\,c5\,d8\,t^{16}}{1\,143\,072\,000}-\frac{c3\,c5\,d8\,t^{16}}{6\,096\,384\,000}-\frac{c1^2\,c6\,d8\,t^{16}}{2\,612\,736\,000}-\frac{13\,c2\,c6\,d8\,t^{16}}{18\,289\,152\,000}-\frac{c1\,c7\,d8\,t^{16}}{6\,096\,384\,000}+\frac{c8\,d8\,t^{16}}{6\,096\,384\,000}$$

Size in memory: 1.2 MB | + Show more | Show all | Iconize | Store full expression in notebook

In[108]:=

```
SeriesCoefficient[%107, {t, 0, 8}]
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Out[108]=

$$-\frac{c1^8}{60\,480}+\frac{c1^6\,c2}{7560}-\frac{5\,c1^4\,c2^2}{18\,144}+\frac{c1^2\,c2^3}{22\,680}+\frac{c2^4}{8640}-\frac{c1^5\,c3}{12\,960}+\frac{13\,c1^3\,c2\,c3}{90\,720}+\frac{5\,c1\,c2^2\,c3}{18\,144}+$$
$$\frac{c1^2\,c3^2}{60\,480}-\frac{c2\,c3^2}{22\,680}+\frac{c1^4\,c4}{12\,960}-\frac{19\,c1^2\,c2\,c4}{181\,440}-\frac{17\,c2^2\,c4}{90\,720}-\frac{13\,c1\,c3\,c4}{181\,440}+\frac{c4^2}{36\,288}-\frac{c1^3\,c5}{25\,920}-$$
$$\frac{c1\,c2\,c5}{11\,340}+\frac{c3\,c5}{60\,480}+\frac{c1^2\,c6}{25\,920}+\frac{13\,c2\,c6}{181\,440}+\frac{c1\,c7}{60\,480}-\frac{c8}{60\,480}+\frac{c1^5\,c2\,d1}{60\,480}-\frac{c1^3\,c2^2\,d1}{12\,096}+$$
$$\frac{c1\,c2^3\,d1}{12\,096}-\frac{c1^4\,c3\,d1}{60\,480}+\frac{11\,c1^2\,c2\,c3\,d1}{120\,960}-\frac{c1\,c3^2\,d1}{120\,960}+\frac{c1^3\,c4\,d1}{60\,480}-\frac{c1\,c2\,c4\,d1}{13\,440}-$$
$$\frac{c1^2\,c5\,d1}{60\,480}+\frac{c1\,c6\,d1}{60\,480}+\frac{c1^6\,d1^2}{60\,480}-\frac{c1^4\,c2\,d1^2}{10\,080}+\frac{11\,c1^2\,c2^2\,d1^2}{120\,960}+\frac{c2^3\,d1^2}{12\,096}+\frac{c1^3\,c3\,d1^2}{24\,192}+$$
$$\frac{11\,c1\,c2\,c3\,d1^2}{120\,960}-\frac{c3^2\,d1^2}{120\,960}-\frac{c1^2\,c4\,d1^2}{24\,192}-\frac{c2\,c4\,d1^2}{13\,440}-\frac{c1\,c5\,d1^2}{60\,480}+\frac{c6\,d1^2}{60\,480}-\frac{c1^3\,c2\,d1^3}{8640}+$$
$$\frac{c1\,c2^2\,d1^3}{2880}+\frac{c1^2\,c3\,d1^3}{8640}-\frac{c1\,c4\,d1^3}{8640}-\frac{c1^4\,d1^4}{17\,280}+\frac{c1^2\,c2\,d1^4}{4320}+\frac{c2^2\,d1^4}{5760}+\frac{c1\,c3\,d1^4}{17\,280}-$$
$$\frac{c4\,d1^4}{17\,280}+\frac{c1\,c2\,d1^5}{2880}+\frac{c1^2\,d1^6}{8640}+\frac{c2\,d1^6}{8640}+\frac{c1\,d1^7}{10\,080}+\frac{d1^8}{40\,320}-\frac{c1^6\,d2}{30\,240}+\frac{c1^4\,c2\,d2}{5040}-$$
$$\frac{11\,c1^2\,c2^2\,d2}{60\,480}-\frac{c2^3\,d2}{6048}-\frac{c1^3\,c3\,d2}{12\,096}-\frac{11\,c1\,c2\,c3\,d2}{60\,480}+\frac{c3^2\,d2}{60\,480}+\frac{c1^2\,c4\,d2}{12\,096}+\frac{c2\,c4\,d2}{6720}+$$
$$\frac{c1\,c5\,d2}{30\,240}-\frac{c6\,d2}{30\,240}+\frac{c1^3\,c2\,d1\,d2}{2880}-\frac{1}{960}\,c1\,c2^2\,d1\,d2-\frac{c1^2\,c3\,d1\,d2}{2880}+\frac{c1\,c4\,d1\,d2}{2880}+$$
$$\frac{c1^4\,d1^2\,d2}{4320}-\frac{c1^2\,c2\,d1^2\,d2}{1080}-\frac{c2^2\,d1^2\,d2}{1440}-\frac{c1\,c3\,d1^2\,d2}{4320}+\frac{c4\,d1^2\,d2}{4320}-\frac{1}{576}\,c1\,c2\,d1^3\,d2-$$

$$\frac{c1^2\,d1^4\,d2}{1440}-\frac{c2\,d1^4\,d2}{1440}-\frac{c1\,d1^5\,d2}{1440}-\frac{d1^6\,d2}{5040}-\frac{c1^4\,d2^2}{8640}+\frac{c1^2\,c2\,d2^2}{2160}+\frac{c2^2\,d2^2}{2880}+\frac{c1\,c3\,d2^2}{8640}-$$
$$\frac{c4\,d2^2}{8640}+\frac{1}{576}\,c1\,c2\,d1\,d2^2+\frac{1}{960}\,c1^2\,d1^2\,d2^2+\frac{1}{960}\,c2\,d1^2\,d2^2+\frac{1}{720}\,c1\,d1^3\,d2^2+$$
$$\frac{d1^4\,d2^2}{2016}-\frac{c1^2\,d2^3}{4320}-\frac{c2\,d2^3}{4320}-\frac{c1\,d1\,d2^3}{1440}-\frac{d1^2\,d2^3}{2520}+\frac{d2^4}{20\,160}-\frac{c1^3\,c2\,d3}{2880}+\frac{1}{960}\,c1\,c2^2\,d3+$$
$$\frac{c1^2\,c3\,d3}{2880}-\frac{c1\,c4\,d3}{2880}-\frac{c1^4\,d1\,d3}{4320}+\frac{c1^2\,c2\,d1\,d3}{1080}+\frac{c2^2\,d1\,d3}{1440}+\frac{c1\,c3\,d1\,d3}{4320}-\frac{c4\,d1\,d3}{4320}+$$
$$\frac{1}{576}\,c1\,c2\,d1^2\,d3+\frac{c1^2\,d1^3\,d3}{1440}+\frac{c2\,d1^3\,d3}{1440}+\frac{c1\,d1^4\,d3}{1440}+\frac{d1^5\,d3}{5040}-\frac{1}{576}\,c1\,c2\,d2\,d3-$$
$$\frac{1}{720}\,c1^2\,d1\,d2\,d3-\frac{1}{720}\,c2\,d1\,d2\,d3-\frac{1}{480}\,c1\,d1^2\,d2\,d3-\frac{d1^3\,d2\,d3}{1260}+\frac{c1\,d2^2\,d3}{1440}+$$
$$\frac{d1\,d2^2\,d3}{1680}+\frac{c1^2\,d3^2}{2880}+\frac{c2\,d3^2}{2880}+\frac{c1\,d1\,d3^2}{1440}+\frac{d1^2\,d3^2}{3360}-\frac{d2\,d3^2}{5040}+\frac{c1^4\,d4}{4320}-\frac{c1^2\,c2\,d4}{1080}-$$
$$\frac{c2^2\,d4}{1440}-\frac{c1\,c3\,d4}{4320}+\frac{c4\,d4}{4320}-\frac{1}{576}\,c1\,c2\,d1\,d4-\frac{c1^2\,d1^2\,d4}{1440}-\frac{c2\,d1^2\,d4}{1440}-\frac{c1\,d1^3\,d4}{1440}-$$
$$\frac{d1^4\,d4}{5040}+\frac{c1^2\,d2\,d4}{1440}+\frac{c2\,d2\,d4}{1440}+\frac{1}{720}\,c1\,d1\,d2\,d4+\frac{d1^2\,d2\,d4}{1680}-\frac{d2^2\,d4}{5040}-\frac{c1\,d3\,d4}{1440}-$$
$$\frac{d1\,d3\,d4}{2520}+\frac{d4^2}{10\,080}+\frac{c1\,c2\,d5}{576}+\frac{c1^2\,d1\,d5}{1440}+\frac{c2\,d1\,d5}{1440}+\frac{c1\,d1^2\,d5}{1440}+\frac{d1^3\,d5}{5040}-\frac{c1\,d2\,d5}{1440}-$$
$$\frac{d1\,d2\,d5}{2520}+\frac{d3\,d5}{5040}-\frac{c1^2\,d6}{1440}-\frac{c2\,d6}{1440}-\frac{c1\,d1\,d6}{1440}-\frac{d1^2\,d6}{5040}+\frac{d2\,d6}{5040}+\frac{c1\,d7}{1440}+\frac{d1\,d7}{5040}-\frac{d8}{5040}$$

In[109]:=

```
Expand[%106 /. {d1 → e1 + 15 * t * H, d2 → e2 + 14 * e1 * t * H + 105 * t ^ 2 * H ^ 2,
   d3 → e3 + 13 * e2 * t * H + 91 * e1 * t ^ 2 * H ^ 2 + 455 * t ^ 3 * H ^ 3,
   d4 → e4 + 12 * e3 * t * H + 78 * e2 * t ^ 2 * H ^ 2 + 364 * e1 * t ^ 3 * H ^ 3 + 1365 * t ^ 4 * H ^ 4,
   d5 → e5 + 11 * e4 * t * H + 66 * e3 * t ^ 2 * H ^ 2 + 286 * e2 * t ^ 3 * H ^ 3 +
     1001 * e1 * t ^ 4 * H ^ 4 + 3003 * t ^ 5 * H ^ 5, d6 → e6 + 10 * e5 * t * H + 55 * e4 * t ^ 2 * H ^ 2 +
     220 * e3 * t ^ 3 * H ^ 3 + 715 * e2 * t ^ 4 * H ^ 4 + 2002 * e1 * t ^ 5 * H ^ 5 + 5005 * t ^ 6 * H ^ 6,
   d7 → e7 + 9 * e6 * t * H + 45 * e5 * t ^ 2 * H ^ 2 + 165 * e4 * t ^ 3 * H ^ 3 +
     495 * e3 * t ^ 4 * H ^ 4 + 1287 * e2 * t ^ 5 * H ^ 5 + 3003 * e1 * t ^ 6 * H ^ 6 + 6435 * t ^ 7 * H ^ 7,
   d8 → e8 + 8 * e7 * t * H + 36 * e6 * t ^ 2 * H ^ 2 + 120 * e5 * t ^ 3 * H ^ 3 +
     330 * e4 * t ^ 4 * H ^ 4 + 792 * e3 * t ^ 5 * H ^ 5 +
     1716 * e2 * t ^ 6 * H ^ 6 + 3432 * e1 * t ^ 7 * H ^ 7 + 6435 * t ^ 8 * H ^ 8}]
```

Out[109]=

$$-\frac{c1^8}{80\,640}+\frac{c1^6\,c2}{10\,080}-\frac{5\,c1^4\,c2^2}{24\,192}+\frac{c1^2\,c2^3}{30\,240}+\frac{c2^4}{11\,520}-\frac{c1^5\,c3}{17\,280}+\frac{13\,c1^3\,c2\,c3}{120\,960}+\frac{5\,c1\,c2^2\,c3}{24\,192}+$$
$$\frac{c1^2\,c3^2}{80\,640}-\frac{c2\,c3^2}{30\,240}+\frac{c1^4\,c4}{17\,280}-\frac{19\,c1^2\,c2\,c4}{241\,920}-\frac{17\,c2^2\,c4}{120\,960}-\frac{13\,c1\,c3\,c4}{241\,920}+\frac{c4^2}{48\,384}-\frac{c1^3\,c5}{34\,560}-$$
$$\frac{c1\,c2\,c5}{15\,120}+\frac{c3\,c5}{80\,640}+\frac{c1^2\,c6}{34\,560}+\frac{13\,c2\,c6}{241\,920}+\frac{c1\,c7}{80\,640}-\frac{c8}{80\,640}+\frac{c1^5\,c2\,e1}{60\,480}-\frac{c1^3\,c2^2\,e1}{12\,096}+$$
$$\frac{c1\,c2^3\,e1}{12\,096}-\frac{c1^4\,c3\,e1}{60\,480}+\frac{11\,c1^2\,c2\,c3\,e1}{120\,960}-\frac{c1\,c3^2\,e1}{120\,960}+\frac{c1^3\,c4\,e1}{60\,480}-\frac{c1\,c2\,c4\,e1}{13\,440}-$$
$$\frac{c1^2\,c5\,e1}{60\,480}+\frac{c1\,c6\,e1}{60\,480}+\frac{c1^6\,e1^2}{60\,480}-\frac{c1^4\,c2\,e1^2}{10\,080}+\frac{11\,c1^2\,c2^2\,e1^2}{120\,960}+\frac{c2^3\,e1^2}{12\,096}+\frac{c1^3\,c3\,e1^2}{24\,192}+$$

$$\frac{11\,c1\,c2\,c3\,e1^2}{120\,960}-\frac{c3^2\,e1^2}{120\,960}-\frac{c1^2\,c4\,e1^2}{24\,192}-\frac{c2\,c4\,e1^2}{13\,440}-\frac{c1\,c5\,e1^2}{60\,480}+\frac{c6\,e1^2}{60\,480}-\frac{c1^3\,c2\,e1^3}{8640}+$$
$$\frac{c1\,c2^2\,e1^3}{2880}+\frac{c1^2\,c3\,e1^3}{8640}-\frac{c1\,c4\,e1^3}{8640}-\frac{c1^4\,e1^4}{17\,280}+\frac{c1^2\,c2\,e1^4}{4320}+\frac{c2^2\,e1^4}{5760}+\frac{c1\,c3\,e1^4}{17\,280}-$$
$$\frac{c4\,e1^4}{17\,280}+\frac{c1\,c2\,e1^5}{2880}+\frac{c1^2\,e1^6}{8640}+\frac{c2\,e1^6}{8640}+\frac{c1\,e1^7}{10\,080}+\frac{e1^8}{40\,320}-\frac{c1^6\,e2}{30\,240}+\frac{c1^4\,c2\,e2}{5040}-$$
$$\frac{11\,c1^2\,c2^2\,e2}{60\,480}-\frac{c2^3\,e2}{6048}-\frac{c1^3\,c3\,e2}{12\,096}-\frac{11\,c1\,c2\,c3\,e2}{60\,480}+\frac{c3^2\,e2}{60\,480}+\frac{c1^2\,c4\,e2}{12\,096}+\frac{c2\,c4\,e2}{6720}+$$
$$\frac{c1\,c5\,e2}{30\,240}-\frac{c6\,e2}{30\,240}+\frac{c1^3\,c2\,e1\,e2}{2880}-\frac{1}{960}\,c1\,c2^2\,e1\,e2-\frac{c1^2\,c3\,e1\,e2}{2880}+\frac{c1\,c4\,e1\,e2}{2880}+$$
$$\frac{c1^4\,e1^2\,e2}{4320}-\frac{c1^2\,c2\,e1^2\,e2}{1080}-\frac{c2^2\,e1^2\,e2}{1440}-\frac{c1\,c3\,e1^2\,e2}{4320}+\frac{c4\,e1^2\,e2}{4320}-\frac{1}{576}\,c1\,c2\,e1^3\,e2-$$
$$\frac{c1^2\,e1^4\,e2}{1440}-\frac{c2\,e1^4\,e2}{1440}-\frac{c1\,e1^5\,e2}{1440}-\frac{e1^6\,e2}{5040}-\frac{c1^4\,e2^2}{8640}+\frac{c1^2\,c2\,e2^2}{2160}+\frac{c2^2\,e2^2}{2880}+\frac{c1\,c3\,e2^2}{8640}-$$
$$\frac{c4\,e2^2}{8640}+\frac{1}{576}\,c1\,c2\,e1\,e2^2+\frac{1}{960}\,c1^2\,e1^2\,e2^2+\frac{1}{960}\,c2\,e1^2\,e2^2+\frac{1}{720}\,c1\,e1^3\,e2^2+$$
$$\frac{e1^4\,e2^2}{2016}-\frac{c1^2\,e2^3}{4320}-\frac{c2\,e2^3}{4320}-\frac{c1\,e1\,e2^3}{1440}-\frac{e1^2\,e2^3}{2520}+\frac{e2^4}{20\,160}-\frac{c1^3\,c2\,e3}{2880}+\frac{1}{960}\,c1\,c2^2\,e3+$$
$$\frac{c1^2\,c3\,e3}{2880}-\frac{c1\,c4\,e3}{2880}-\frac{c1^4\,e1\,e3}{4320}+\frac{c1^2\,c2\,e1\,e3}{1080}+\frac{c2^2\,e1\,e3}{1440}+\frac{c1\,c3\,e1\,e3}{4320}-\frac{c4\,e1\,e3}{4320}+$$
$$\frac{1}{576}\,c1\,c2\,e1^2\,e3+\frac{c1^2\,e1^3\,e3}{1440}+\frac{c2\,e1^3\,e3}{1440}+\frac{c1\,e1^4\,e3}{1440}+\frac{e1^5\,e3}{5040}-\frac{1}{576}\,c1\,c2\,e2\,e3-$$
$$\frac{1}{720}\,c1^2\,e1\,e2\,e3-\frac{1}{720}\,c2\,e1\,e2\,e3-\frac{1}{480}\,c1\,e1^2\,e2\,e3-\frac{e1^3\,e2\,e3}{1260}+\frac{c1\,e2^2\,e3}{1440}+$$
$$\frac{e1\,e2^2\,e3}{1680}+\frac{c1^2\,e3^2}{2880}+\frac{c2\,e3^2}{2880}+\frac{c1\,e1\,e3^2}{1440}+\frac{e1^2\,e3^2}{3360}-\frac{e2\,e3^2}{5040}+\frac{c1^4\,e4}{4320}-\frac{c1^2\,c2\,e4}{1080}-$$
$$\frac{c2^2\,e4}{1440}-\frac{c1\,c3\,e4}{4320}+\frac{c4\,e4}{4320}-\frac{1}{576}\,c1\,c2\,e1\,e4-\frac{c1^2\,e1^2\,e4}{1440}-\frac{c2\,e1^2\,e4}{1440}-\frac{c1\,e1^3\,e4}{1440}-$$
$$\frac{e1^4\,e4}{5040}+\frac{c1^2\,e2\,e4}{1440}+\frac{c2\,e2\,e4}{1440}+\frac{1}{720}\,c1\,e1\,e2\,e4+\frac{e1^2\,e2\,e4}{1680}-\frac{e2^2\,e4}{5040}-\frac{c1\,e3\,e4}{1440}-$$
$$\frac{e1\,e3\,e4}{2520}+\frac{e4^2}{10\,080}+\frac{c1\,c2\,e5}{576}+\frac{c1^2\,e1\,e5}{1440}+\frac{c2\,e1\,e5}{1440}+\frac{c1\,e1^2\,e5}{1440}+\frac{e1^3\,e5}{5040}-\frac{c1\,e2\,e5}{1440}-$$
$$\frac{e1\,e2\,e5}{2520}+\frac{e3\,e5}{5040}-\frac{c1^2\,e6}{1440}-\frac{c2\,e6}{1440}-\frac{c1\,e1\,e6}{1440}-\frac{e1^2\,e6}{5040}+\frac{e2\,e6}{5040}+\frac{c1\,e7}{1440}+\frac{e1\,e7}{5040}-$$
$$\frac{e8}{5040}+\frac{c1^5\,c2\,H\,t}{4032}-\frac{5\,c1^3\,c2^2\,H\,t}{4032}+\frac{5\,c1\,c2^3\,H\,t}{4032}-\frac{c1^4\,c3\,H\,t}{4032}+\frac{11\,c1^2\,c2\,c3\,H\,t}{8064}-$$
$$\frac{c1\,c3^2\,H\,t}{8064}+\frac{c1^3\,c4\,H\,t}{4032}-\frac{1}{896}\,c1\,c2\,c4\,H\,t-\frac{c1^2\,c5\,H\,t}{4032}+\frac{c1\,c6\,H\,t}{4032}+\frac{c1^6\,e1\,H\,t}{30\,240}-$$
$$\frac{c1^4\,c2\,e1\,H\,t}{5040}+\frac{11\,c1^2\,c2^2\,e1\,H\,t}{60\,480}+\frac{c2^3\,e1\,H\,t}{6048}+\frac{c1^3\,c3\,e1\,H\,t}{12\,096}+\frac{11\,c1\,c2\,c3\,e1\,H\,t}{60\,480}-$$
$$\frac{c3^2\,e1\,H\,t}{60\,480}-\frac{c1^2\,c4\,e1\,H\,t}{12\,096}-\frac{c2\,c4\,e1\,H\,t}{6720}-\frac{c1\,c5\,e1\,H\,t}{30\,240}+\frac{c6\,e1\,H\,t}{30\,240}-\frac{c1^3\,c2\,e1^2\,H\,t}{2880}+$$
$$\frac{1}{960}\,c1\,c2^2\,e1^2\,H\,t+\frac{c1^2\,c3\,e1^2\,H\,t}{2880}-\frac{c1\,c4\,e1^2\,H\,t}{2880}-\frac{c1^4\,e1^3\,H\,t}{4320}+\frac{c1^2\,c2\,e1^3\,H\,t}{1080}+$$

$$\frac{c2^2\, e1^3\, H\, t}{1440} + \frac{c1\, c3\, e1^3\, H\, t}{4320} - \frac{c4\, e1^3\, H\, t}{4320} + \frac{1}{576}\, c1\, c2\, e1^4\, H\, t + \frac{c1^2\, e1^5\, H\, t}{1440} + \frac{c2\, e1^5\, H\, t}{1440} +$$
$$\frac{c1\, e1^6\, H\, t}{1440} + \frac{e1^7\, H\, t}{5040} + \frac{c1^3\, c2\, e2\, H\, t}{1440} - \frac{1}{480}\, c1\, c2^2\, e2\, H\, t - \frac{c1^2\, c3\, e2\, H\, t}{1440} + \frac{c1\, c4\, e2\, H\, t}{1440} +$$
$$\frac{c1^4\, e1\, e2\, H\, t}{1440} - \frac{1}{360}\, c1^2\, c2\, e1\, e2\, H\, t - \frac{1}{480}\, c2^2\, e1\, e2\, H\, t - \frac{c1\, c3\, e1\, e2\, H\, t}{1440} + \frac{c4\, e1\, e2\, H\, t}{1440} -$$
$$\frac{1}{144}\, c1\, c2\, e1^2\, e2\, H\, t - \frac{1}{288}\, c1^2\, e1^3\, e2\, H\, t - \frac{1}{288}\, c2\, e1^3\, e2\, H\, t - \frac{1}{240}\, c1\, e1^4\, e2\, H\, t -$$
$$\frac{1}{720}\, e1^5\, e2\, H\, t + \frac{1}{288}\, c1\, c2\, e2^2\, H\, t + \frac{1}{288}\, c1^2\, e1\, e2^2\, H\, t + \frac{1}{288}\, c2\, e1\, e2^2\, H\, t +$$
$$\frac{1}{160}\, c1\, e1^2\, e2^2\, H\, t + \frac{1}{360}\, e1^3\, e2^2\, H\, t - \frac{1}{720}\, c1\, e2^3\, H\, t - \frac{1}{720}\, e1\, e2^3\, H\, t - \frac{c1^4\, e3\, H\, t}{1440} +$$
$$\frac{1}{360}\, c1^2\, c2\, e3\, H\, t + \frac{1}{480}\, c2^2\, e3\, H\, t + \frac{c1\, c3\, e3\, H\, t}{1440} - \frac{c4\, e3\, H\, t}{1440} + \frac{1}{144}\, c1\, c2\, e1\, e3\, H\, t +$$
$$\frac{1}{288}\, c1^2\, e1^2\, e3\, H\, t + \frac{1}{288}\, c2\, e1^2\, e3\, H\, t + \frac{1}{240}\, c1\, e1^3\, e3\, H\, t + \frac{1}{720}\, e1^4\, e3\, H\, t -$$
$$\frac{1}{288}\, c1^2\, e2\, e3\, H\, t - \frac{1}{288}\, c2\, e2\, e3\, H\, t - \frac{1}{120}\, c1\, e1\, e2\, e3\, H\, t - \frac{1}{240}\, e1^2\, e2\, e3\, H\, t +$$
$$\frac{1}{720}\, e2^2\, e3\, H\, t + \frac{1}{480}\, c1\, e3^2\, H\, t + \frac{1}{720}\, e1\, e3^2\, H\, t - \frac{1}{144}\, c1\, c2\, e4\, H\, t - \frac{1}{288}\, c1^2\, e1\, e4\, H\, t -$$
$$\frac{1}{288}\, c2\, e1\, e4\, H\, t - \frac{1}{240}\, c1\, e1^2\, e4\, H\, t - \frac{1}{720}\, e1^3\, e4\, H\, t + \frac{1}{240}\, c1\, e2\, e4\, H\, t +$$
$$\frac{1}{360}\, e1\, e2\, e4\, H\, t - \frac{1}{720}\, e3\, e4\, H\, t + \frac{1}{288}\, c1^2\, e5\, H\, t + \frac{1}{288}\, c2\, e5\, H\, t + \frac{1}{240}\, c1\, e1\, e5\, H\, t +$$
$$\frac{1}{720}\, e1^2\, e5\, H\, t - \frac{1}{720}\, e2\, e5\, H\, t - \frac{1}{240}\, c1\, e6\, H\, t - \frac{1}{720}\, e1\, e6\, H\, t + \frac{e7\, H\, t}{720} + \frac{c1^6\, H^2\, t^2}{4032} -$$
$$\frac{1}{672}\, c1^4\, c2\, H^2\, t^2 + \frac{11\, c1^2\, c2^2\, H^2\, t^2}{8064} + \frac{5\, c2^3\, H^2\, t^2}{4032} + \frac{5\, c1^3\, c3\, H^2\, t^2}{8064} + \frac{11\, c1\, c2\, c3\, H^2\, t^2}{8064} -$$
$$\frac{c3^2\, H^2\, t^2}{8064} - \frac{5\, c1^2\, c4\, H^2\, t^2}{8064} - \frac{1}{896}\, c2\, c4\, H^2\, t^2 - \frac{c1\, c5\, H^2\, t^2}{4032} + \frac{c6\, H^2\, t^2}{4032} - \frac{c1^3\, c2\, e1\, H^2\, t^2}{2880} +$$
$$\frac{1}{960}\, c1\, c2^2\, e1\, H^2\, t^2 + \frac{c1^2\, c3\, e1\, H^2\, t^2}{2880} - \frac{c1\, c4\, e1\, H^2\, t^2}{2880} - \frac{c1^4\, e1^2\, H^2\, t^2}{2880} + \frac{1}{720}\, c1^2\, c2\, e1^2\, H^2\, t^2 +$$
$$\frac{1}{960}\, c2^2\, e1^2\, H^2\, t^2 + \frac{c1\, c3\, e1^2\, H^2\, t^2}{2880} - \frac{c4\, e1^2\, H^2\, t^2}{2880} + \frac{1}{288}\, c1\, c2\, e1^3\, H^2\, t^2 + \frac{1}{576}\, c1^2\, e1^4\, H^2\, t^2 +$$
$$\frac{1}{576}\, c2\, e1^4\, H^2\, t^2 + \frac{1}{480}\, c1\, e1^5\, H^2\, t^2 + \frac{e1^6\, H^2\, t^2}{1440} + \frac{c1^4\, e2\, H^2\, t^2}{1440} - \frac{1}{360}\, c1^2\, c2\, e2\, H^2\, t^2 -$$
$$\frac{1}{480}\, c2^2\, e2\, H^2\, t^2 - \frac{c1\, c3\, e2\, H^2\, t^2}{1440} + \frac{c4\, e2\, H^2\, t^2}{1440} - \frac{1}{96}\, c1\, c2\, e1\, e2\, H^2\, t^2 - \frac{1}{144}\, c1^2\, e1^2\, e2\, H^2\, t^2 -$$
$$\frac{1}{144}\, c2\, e1^2\, e2\, H^2\, t^2 - \frac{1}{96}\, c1\, e1^3\, e2\, H^2\, t^2 - \frac{1}{240}\, e1^4\, e2\, H^2\, t^2 + \frac{1}{288}\, c1^2\, e2^2\, H^2\, t^2 +$$
$$\frac{1}{288}\, c2\, e2^2\, H^2\, t^2 + \frac{1}{96}\, c1\, e1\, e2^2\, H^2\, t^2 + \frac{1}{160}\, e1^2\, e2^2\, H^2\, t^2 - \frac{1}{720}\, e2^3\, H^2\, t^2 +$$
$$\frac{1}{96}\, c1\, c2\, e3\, H^2\, t^2 + \frac{1}{144}\, c1^2\, e1\, e3\, H^2\, t^2 + \frac{1}{144}\, c2\, e1\, e3\, H^2\, t^2 + \frac{1}{96}\, c1\, e1^2\, e3\, H^2\, t^2 +$$
$$\frac{1}{240}\, e1^3\, e3\, H^2\, t^2 - \frac{1}{96}\, c1\, e2\, e3\, H^2\, t^2 - \frac{1}{120}\, e1\, e2\, e3\, H^2\, t^2 + \frac{1}{480}\, e3^2\, H^2\, t^2 - \frac{1}{144}\, c1^2\, e4\, H^2\, t^2 -$$

$$\frac{1}{144} c2\, e4\, H^2 t^2 - \frac{1}{96} c1\, e1\, e4\, H^2 t^2 - \frac{1}{240} e1^2\, e4\, H^2 t^2 + \frac{1}{240} e2\, e4\, H^2 t^2 + \frac{1}{96} c1\, e5\, H^2 t^2 +$$
$$\frac{1}{240} e1\, e5\, H^2 t^2 - \frac{1}{240} e6\, H^2 t^2 - \frac{1}{576} c1^3\, c2\, H^3 t^3 + \frac{1}{192} c1\, c2^2\, H^3 t^3 + \frac{1}{576} c1^2\, c3\, H^3 t^3 -$$
$$\frac{1}{576} c1\, c4\, H^3 t^3 - \frac{c1^4\, e1\, H^3 t^3}{4320} + \frac{c1^2\, c2\, e1\, H^3 t^3}{1080} + \frac{c2^2\, e1\, H^3 t^3}{1440} + \frac{c1\, c3\, e1\, H^3 t^3}{4320} -$$
$$\frac{c4\, e1\, H^3 t^3}{4320} + \frac{1}{288} c1\, c2\, e1^2\, H^3 t^3 + \frac{1}{432} c1^2\, e1^3\, H^3 t^3 + \frac{1}{432} c2\, e1^3\, H^3 t^3 + \frac{1}{288} c1\, e1^4\, H^3 t^3 +$$
$$\frac{1}{720} e1^5\, H^3 t^3 - \frac{1}{144} c1\, c2\, e2\, H^3 t^3 - \frac{1}{144} c1^2\, e1\, e2\, H^3 t^3 - \frac{1}{144} c2\, e1\, e2\, H^3 t^3 -$$
$$\frac{1}{72} c1\, e1^2\, e2\, H^3 t^3 - \frac{1}{144} e1^3\, e2\, H^3 t^3 + \frac{1}{144} c1\, e2^2\, H^3 t^3 + \frac{1}{144} e1\, e2^2\, H^3 t^3 +$$
$$\frac{1}{144} c1^2\, e3\, H^3 t^3 + \frac{1}{144} c2\, e3\, H^3 t^3 + \frac{1}{72} c1\, e1\, e3\, H^3 t^3 + \frac{1}{144} e1^2\, e3\, H^3 t^3 - \frac{1}{144} e2\, e3\, H^3 t^3 -$$
$$\frac{1}{72} c1\, e4\, H^3 t^3 - \frac{1}{144} e1\, e4\, H^3 t^3 + \frac{1}{144} e5\, H^3 t^3 - \frac{c1^4\, H^4 t^4}{1152} + \frac{1}{288} c1^2\, c2\, H^4 t^4 +$$
$$\frac{1}{384} c2^2\, H^4 t^4 + \frac{c1\, c3\, H^4 t^4}{1152} - \frac{c4\, H^4 t^4}{1152} + \frac{1}{576} c1\, c2\, e1\, H^4 t^4 + \frac{1}{576} c1^2\, e1^2\, H^4 t^4 +$$
$$\frac{1}{576} c2\, e1^2\, H^4 t^4 + \frac{1}{288} c1\, e1^3\, H^4 t^4 + \frac{1}{576} e1^4\, H^4 t^4 - \frac{1}{288} c1^2\, e2\, H^4 t^4 - \frac{1}{288} c2\, e2\, H^4 t^4 -$$
$$\frac{1}{96} c1\, e1\, e2\, H^4 t^4 - \frac{1}{144} e1^2\, e2\, H^4 t^4 + \frac{1}{288} e2^2\, H^4 t^4 + \frac{1}{96} c1\, e3\, H^4 t^4 + \frac{1}{144} e1\, e3\, H^4 t^4 -$$
$$\frac{1}{144} e4\, H^4 t^4 + \frac{1}{192} c1\, c2\, H^5 t^5 + \frac{c1^2\, e1\, H^5 t^5}{1440} + \frac{c2\, e1\, H^5 t^5}{1440} + \frac{1}{480} c1\, e1^2\, H^5 t^5 +$$
$$\frac{1}{720} e1^3\, H^5 t^5 - \frac{1}{240} c1\, e2\, H^5 t^5 - \frac{1}{240} e1\, e2\, H^5 t^5 + \frac{1}{240} e3\, H^5 t^5 + \frac{1}{576} c1^2\, H^6 t^6 +$$
$$\frac{1}{576} c2\, H^6 t^6 + \frac{c1\, e1\, H^6 t^6}{1440} + \frac{e1^2\, H^6 t^6}{1440} - \frac{1}{720} e2\, H^6 t^6 + \frac{1}{672} c1\, H^7 t^7 + \frac{e1\, H^7 t^7}{5040} + \frac{H^8 t^8}{2688}$$

In[110]:=

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Expand[%108 /. {d1 → e1 + 20 * t * H, d2 → e2 + 19 * e1 * t * H + 190 * t ^ 2 * H ^ 2,
   d3 → e3 + 18 * e2 * t * H + 171 * e1 * t ^ 2 * H ^ 2 + 1140 * t ^ 3 * H ^ 3,
   d4 → e4 + 17 * e3 * t * H + 153 * e2 * t ^ 2 * H ^ 2 + 969 * e1 * t ^ 3 * H ^ 3 + 4845 * t ^ 4 * H ^ 4,
   d5 → e5 + 16 * e4 * t * H + 136 * e3 * t ^ 2 * H ^ 2 +
     816 * e2 * t ^ 3 * H ^ 3 + 3876 * e1 * t ^ 4 * H ^ 4 + 15 504 * t ^ 5 * H ^ 5,
   d6 → e6 + 15 * e5 * t * H + 120 * e4 * t ^ 2 * H ^ 2 + 680 * e3 * t ^ 3 * H ^ 3 +
     3060 * e2 * t ^ 4 * H ^ 4 + 11 628 * e1 * t ^ 5 * H ^ 5 + 38 760 * t ^ 6 * H ^ 6, d7 →
    e7 + 14 * e6 * t * H + 105 * e5 * t ^ 2 * H ^ 2 + 560 * e4 * t ^ 3 * H ^ 3 + 2380 * e3 * t ^ 4 * H ^ 4 +
     8568 * e2 * t ^ 5 * H ^ 5 + 27 132 * e1 * t ^ 6 * H ^ 6 + 77 520 * t ^ 7 * H ^ 7,
   d8 → e8 + 13 * e7 * t * H + 91 * e6 * t ^ 2 * H ^ 2 + 455 * e5 * t ^ 3 * H ^ 3 +
     1820 * e4 * t ^ 4 * H ^ 4 + 6188 * e3 * t ^ 5 * H ^ 5 + 18 564 * e2 * t ^ 6 * H ^ 6 +
     50 388 * e1 * t ^ 7 * H ^ 7 + 125 970 * t ^ 8 * H ^ 8}]
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Out[110]=

$$-\frac{c1^8}{60\,480} + \frac{c1^6\, c2}{7560} - \frac{5\, c1^4\, c2^2}{18\,144} + \frac{c1^2\, c2^3}{22\,680} + \frac{c2^4}{8640} - \frac{c1^5\, c3}{12\,960} + \frac{13\, c1^3\, c2\, c3}{90\,720} + \frac{5\, c1\, c2^2\, c3}{18\,144} +$$
$$\frac{c1^2\, c3^2}{60\,480} - \frac{c2\, c3^2}{22\,680} + \frac{c1^4\, c4}{12\,960} - \frac{19\, c1^2\, c2\, c4}{181\,440} - \frac{17\, c2^2\, c4}{90\,720} - \frac{13\, c1\, c3\, c4}{181\,440} + \frac{c4^2}{36\,288} - \frac{c1^3\, c5}{25\,920} -$$

$$\frac{c1\,c2\,c5}{11340}+\frac{c3\,c5}{60480}+\frac{c1^2\,c6}{25920}+\frac{13\,c2\,c6}{181440}+\frac{c1\,c7}{60480}-\frac{c8}{60480}+\frac{c1^5\,c2\,e1}{60480}-\frac{c1^3\,c2^2\,e1}{12096}+$$
$$\frac{c1\,c2^3\,e1}{12096}-\frac{c1^4\,c3\,e1}{60480}+\frac{11\,c1^2\,c2\,c3\,e1}{120960}-\frac{c1\,c3^2\,e1}{120960}+\frac{c1^3\,c4\,e1}{60480}-\frac{c1\,c2\,c4\,e1}{13440}-$$
$$\frac{c1^2\,c5\,e1}{60480}+\frac{c1\,c6\,e1}{60480}+\frac{c1^6\,e1^2}{60480}-\frac{c1^4\,c2\,e1^2}{10080}+\frac{11\,c1^2\,c2^2\,e1^2}{120960}+\frac{c2^3\,e1^2}{12096}+\frac{c1^3\,c3\,e1^2}{24192}+$$
$$\frac{11\,c1\,c2\,c3\,e1^2}{120960}-\frac{c3^2\,e1^2}{120960}-\frac{c1^2\,c4\,e1^2}{24192}-\frac{c2\,c4\,e1^2}{13440}-\frac{c1\,c5\,e1^2}{60480}+\frac{c6\,e1^2}{60480}-\frac{c1^3\,c2\,e1^3}{8640}+$$
$$\frac{c1\,c2^2\,e1^3}{2880}+\frac{c1^2\,c3\,e1^3}{8640}-\frac{c1\,c4\,e1^3}{8640}-\frac{c1^4\,e1^4}{17280}+\frac{c1^2\,c2\,e1^4}{4320}+\frac{c2^2\,e1^4}{5760}+\frac{c1\,c3\,e1^4}{17280}-$$
$$\frac{c4\,e1^4}{17280}+\frac{c1\,c2\,e1^5}{2880}+\frac{c1^2\,e1^6}{8640}+\frac{c2\,e1^6}{8640}+\frac{c1\,e1^7}{10080}+\frac{e1^8}{40320}-\frac{c1^6\,e2}{30240}+\frac{c1^4\,c2\,e2}{5040}-$$
$$\frac{11\,c1^2\,c2^2\,e2}{60480}-\frac{c2^3\,e2}{6048}-\frac{c1^3\,c3\,e2}{12096}-\frac{11\,c1\,c2\,c3\,e2}{60480}+\frac{c3^2\,e2}{60480}+\frac{c1^2\,c4\,e2}{12096}+\frac{c2\,c4\,e2}{6720}+$$
$$\frac{c1\,c5\,e2}{30240}-\frac{c6\,e2}{30240}+\frac{c1^3\,c2\,e1\,e2}{2880}-\frac{1}{960}\,c1\,c2^2\,e1\,e2-\frac{c1^2\,c3\,e1\,e2}{2880}+\frac{c1\,c4\,e1\,e2}{2880}+$$
$$\frac{c1^4\,e1^2\,e2}{4320}-\frac{c1^2\,c2\,e1^2\,e2}{1080}-\frac{c2^2\,e1^2\,e2}{1440}-\frac{c1\,c3\,e1^2\,e2}{4320}+\frac{c4\,e1^2\,e2}{4320}-\frac{1}{576}\,c1\,c2\,e1^3\,e2-$$
$$\frac{c1^2\,e1^4\,e2}{1440}-\frac{c2\,e1^4\,e2}{1440}-\frac{c1\,e1^5\,e2}{1440}-\frac{e1^6\,e2}{5040}-\frac{c1^4\,e2^2}{8640}+\frac{c1^2\,c2\,e2^2}{2160}+\frac{c2^2\,e2^2}{2880}+\frac{c1\,c3\,e2^2}{8640}-$$
$$\frac{c4\,e2^2}{8640}+\frac{1}{576}\,c1\,c2\,e1\,e2^2+\frac{1}{960}\,c1^2\,e1^2\,e2^2+\frac{1}{960}\,c2\,e1^2\,e2^2+\frac{1}{720}\,c1\,e1^3\,e2^2+$$
$$\frac{e1^4\,e2^2}{2016}-\frac{c1^2\,e2^3}{4320}-\frac{c2\,e2^3}{4320}-\frac{c1\,e1\,e2^3}{1440}-\frac{e1^2\,e2^3}{2520}+\frac{e2^4}{20160}-\frac{c1^3\,c2\,e3}{2880}+\frac{1}{960}\,c1\,c2^2\,e3+$$
$$\frac{c1^2\,c3\,e3}{2880}-\frac{c1\,c4\,e3}{2880}-\frac{c1^4\,e1\,e3}{4320}+\frac{c1^2\,c2\,e1\,e3}{1080}+\frac{c2^2\,e1\,e3}{1440}+\frac{c1\,c3\,e1\,e3}{4320}-\frac{c4\,e1\,e3}{4320}+$$
$$\frac{1}{576}\,c1\,c2\,e1^2\,e3+\frac{c1^2\,e1^3\,e3}{1440}+\frac{c2\,e1^3\,e3}{1440}+\frac{c1\,e1^4\,e3}{1440}+\frac{e1^5\,e3}{5040}-\frac{1}{576}\,c1\,c2\,e2\,e3-$$
$$\frac{1}{720}\,c1^2\,e1\,e2\,e3-\frac{1}{720}\,c2\,e1\,e2\,e3-\frac{1}{480}\,c1\,e1^2\,e2\,e3-\frac{e1^3\,e2\,e3}{1260}+\frac{c1\,e2^2\,e3}{1440}+$$
$$\frac{e1\,e2^2\,e3}{1680}+\frac{c1^2\,e3^2}{2880}+\frac{c2\,e3^2}{2880}+\frac{c1\,e1\,e3^2}{1440}+\frac{e1^2\,e3^2}{3360}-\frac{e2\,e3^2}{5040}+\frac{c1^4\,e4}{4320}-\frac{c1^2\,c2\,e4}{1080}-$$
$$\frac{c2^2\,e4}{1440}-\frac{c1\,c3\,e4}{4320}+\frac{c4\,e4}{4320}-\frac{1}{576}\,c1\,c2\,e1\,e4-\frac{c1^2\,e1^2\,e4}{1440}-\frac{c2\,e1^2\,e4}{1440}-\frac{c1\,e1^3\,e4}{1440}-$$
$$\frac{e1^4\,e4}{5040}+\frac{c1^2\,e2\,e4}{1440}+\frac{c2\,e2\,e4}{1440}+\frac{1}{720}\,c1\,e1\,e2\,e4+\frac{e1^2\,e2\,e4}{1680}-\frac{e2^2\,e4}{5040}-\frac{c1\,e3\,e4}{1440}-$$
$$\frac{e1\,e3\,e4}{2520}+\frac{e4^2}{10080}+\frac{c1\,c2\,e5}{576}+\frac{c1^2\,e1\,e5}{1440}+\frac{c2\,e1\,e5}{1440}+\frac{c1\,e1^2\,e5}{1440}+\frac{e1^3\,e5}{5040}-\frac{c1\,e2\,e5}{1440}-$$
$$\frac{e1\,e2\,e5}{2520}+\frac{e3\,e5}{5040}-\frac{c1^2\,e6}{1440}-\frac{c2\,e6}{1440}-\frac{c1\,e1\,e6}{1440}-\frac{e1^2\,e6}{5040}+\frac{e2\,e6}{5040}+\frac{c1\,e7}{1440}+\frac{e1\,e7}{5040}-$$
$$\frac{e8}{5040}+\frac{c1^5\,c2\,H\,t}{3024}-\frac{5\,c1^3\,c2^2\,H\,t}{3024}+\frac{5\,c1\,c2^3\,H\,t}{3024}-\frac{c1^4\,c3\,H\,t}{3024}+\frac{11\,c1^2\,c2\,c3\,H\,t}{6048}-$$
$$\frac{c1\,c3^2\,H\,t}{6048}+\frac{c1^3\,c4\,H\,t}{3024}-\frac{1}{672}\,c1\,c2\,c4\,H\,t-\frac{c1^2\,c5\,H\,t}{3024}+\frac{c1\,c6\,H\,t}{3024}+\frac{c1^6\,e1\,H\,t}{30240}-$$

$$\frac{c1^4\, c2\, e1\, H\, t}{5040} + \frac{11\, c1^2\, c2^2\, e1\, H\, t}{60\,480} + \frac{c2^3\, e1\, H\, t}{6048} + \frac{c1^3\, c3\, e1\, H\, t}{12\,096} + \frac{11\, c1\, c2\, c3\, e1\, H\, t}{60\,480} -$$
$$\frac{c3^2\, e1\, H\, t}{60\,480} - \frac{c1^2\, c4\, e1\, H\, t}{12\,096} - \frac{c2\, c4\, e1\, H\, t}{6720} - \frac{c1\, c5\, e1\, H\, t}{30\,240} + \frac{c6\, e1\, H\, t}{30\,240} - \frac{c1^3\, c2\, e1^2\, H\, t}{2880} +$$
$$\frac{1}{960}\, c1\, c2^2\, e1^2\, H\, t + \frac{c1^2\, c3\, e1^2\, H\, t}{2880} - \frac{c1\, c4\, e1^2\, H\, t}{2880} - \frac{c1^4\, e1^3\, H\, t}{4320} + \frac{c1^2\, c2\, e1^3\, H\, t}{1080} +$$
$$\frac{c2^2\, e1^3\, H\, t}{1440} + \frac{c1\, c3\, e1^3\, H\, t}{4320} - \frac{c4\, e1^3\, H\, t}{4320} + \frac{1}{576}\, c1\, c2\, e1^4\, H\, t + \frac{c1^2\, e1^5\, H\, t}{1440} + \frac{c2\, e1^5\, H\, t}{1440} +$$
$$\frac{c1\, e1^6\, H\, t}{1440} + \frac{e1^7\, H\, t}{5040} + \frac{c1^3\, c2\, e2\, H\, t}{1440} - \frac{1}{480}\, c1\, c2^2\, e2\, H\, t - \frac{c1^2\, c3\, e2\, H\, t}{1440} + \frac{c1\, c4\, e2\, H\, t}{1440} +$$
$$\frac{c1^4\, e1\, e2\, H\, t}{1440} - \frac{1}{360}\, c1^2\, c2\, e1\, e2\, H\, t - \frac{1}{480}\, c2^2\, e1\, e2\, H\, t - \frac{c1\, c3\, e1\, e2\, H\, t}{1440} + \frac{c4\, e1\, e2\, H\, t}{1440} -$$
$$\frac{1}{144}\, c1\, c2\, e1^2\, e2\, H\, t - \frac{1}{288}\, c1^2\, e1^3\, e2\, H\, t - \frac{1}{288}\, c2\, e1^3\, e2\, H\, t - \frac{1}{240}\, c1\, e1^4\, e2\, H\, t -$$
$$\frac{1}{720}\, e1^5\, e2\, H\, t + \frac{1}{288}\, c1\, c2\, e2^2\, H\, t + \frac{1}{288}\, c1^2\, e1\, e2^2\, H\, t + \frac{1}{288}\, c2\, e1\, e2^2\, H\, t +$$
$$\frac{1}{160}\, c1\, e1^2\, e2^2\, H\, t + \frac{1}{360}\, e1^3\, e2^2\, H\, t - \frac{1}{720}\, c1\, e2^3\, H\, t - \frac{1}{720}\, e1\, e2^3\, H\, t - \frac{c1^4\, e3\, H\, t}{1440} +$$
$$\frac{1}{360}\, c1^2\, c2\, e3\, H\, t + \frac{1}{480}\, c2^2\, e3\, H\, t + \frac{c1\, c3\, e3\, H\, t}{1440} - \frac{c4\, e3\, H\, t}{1440} + \frac{1}{144}\, c1\, c2\, e1\, e3\, H\, t +$$
$$\frac{1}{288}\, c1^2\, e1^2\, e3\, H\, t + \frac{1}{288}\, c2\, e1^2\, e3\, H\, t + \frac{1}{240}\, c1\, e1^3\, e3\, H\, t + \frac{1}{720}\, e1^4\, e3\, H\, t -$$
$$\frac{1}{288}\, c1^2\, e2\, e3\, H\, t - \frac{1}{288}\, c2\, e2\, e3\, H\, t - \frac{1}{120}\, c1\, e1\, e2\, e3\, H\, t - \frac{1}{240}\, e1^2\, e2\, e3\, H\, t +$$
$$\frac{1}{720}\, e2^2\, e3\, H\, t + \frac{1}{480}\, c1\, e3^2\, H\, t + \frac{1}{720}\, e1\, e3^2\, H\, t - \frac{1}{144}\, c1\, c2\, e4\, H\, t - \frac{1}{288}\, c1^2\, e1\, e4\, H\, t -$$
$$\frac{1}{288}\, c2\, e1\, e4\, H\, t - \frac{1}{240}\, c1\, e1^2\, e4\, H\, t - \frac{1}{720}\, e1^3\, e4\, H\, t + \frac{1}{240}\, c1\, e2\, e4\, H\, t +$$
$$\frac{1}{360}\, e1\, e2\, e4\, H\, t - \frac{1}{720}\, e3\, e4\, H\, t + \frac{1}{288}\, c1^2\, e5\, H\, t + \frac{1}{288}\, c2\, e5\, H\, t + \frac{1}{240}\, c1\, e1\, e5\, H\, t +$$
$$\frac{1}{720}\, e1^2\, e5\, H\, t - \frac{1}{720}\, e2\, e5\, H\, t - \frac{1}{240}\, c1\, e6\, H\, t - \frac{1}{720}\, e1\, e6\, H\, t + \frac{e7\, H\, t}{720} + \frac{c1^6\, H^2\, t^2}{3024} -$$
$$\frac{1}{504}\, c1^4\, c2\, H^2\, t^2 + \frac{11\, c1^2\, c2^2\, H^2\, t^2}{6048} + \frac{5\, c2^3\, H^2\, t^2}{3024} + \frac{5\, c1^3\, c3\, H^2\, t^2}{6048} + \frac{11\, c1\, c2\, c3\, H^2\, t^2}{6048} -$$
$$\frac{c3^2\, H^2\, t^2}{6048} - \frac{5\, c1^2\, c4\, H^2\, t^2}{6048} - \frac{1}{672}\, c2\, c4\, H^2\, t^2 - \frac{c1\, c5\, H^2\, t^2}{3024} + \frac{c6\, H^2\, t^2}{3024} - \frac{c1^3\, c2\, e1\, H^2\, t^2}{2880} +$$
$$\frac{1}{960}\, c1\, c2^2\, e1\, H^2\, t^2 + \frac{c1^2\, c3\, e1\, H^2\, t^2}{2880} - \frac{c1\, c4\, e1\, H^2\, t^2}{2880} - \frac{c1^4\, e1^2\, H^2\, t^2}{2880} + \frac{1}{720}\, c1^2\, c2\, e1^2\, H^2\, t^2 +$$
$$\frac{1}{960}\, c2^2\, e1^2\, H^2\, t^2 + \frac{c1\, c3\, e1^2\, H^2\, t^2}{2880} - \frac{c4\, e1^2\, H^2\, t^2}{2880} + \frac{1}{288}\, c1\, c2\, e1^3\, H^2\, t^2 + \frac{1}{576}\, c1^2\, e1^4\, H^2\, t^2 +$$
$$\frac{1}{576}\, c2\, e1^4\, H^2\, t^2 + \frac{1}{480}\, c1\, e1^5\, H^2\, t^2 + \frac{e1^6\, H^2\, t^2}{1440} + \frac{c1^4\, e2\, H^2\, t^2}{1440} - \frac{1}{360}\, c1^2\, c2\, e2\, H^2\, t^2 -$$
$$\frac{1}{480}\, c2^2\, e2\, H^2\, t^2 - \frac{c1\, c3\, e2\, H^2\, t^2}{1440} + \frac{c4\, e2\, H^2\, t^2}{1440} - \frac{1}{96}\, c1\, c2\, e1\, e2\, H^2\, t^2 - \frac{1}{144}\, c1^2\, e1^2\, e2\, H^2\, t^2 -$$

$$\frac{1}{144}\, c2\, e1^2\, e2\, H^2\, t^2 - \frac{1}{96}\, c1\, e1^3\, e2\, H^2\, t^2 - \frac{1}{240}\, e1^4\, e2\, H^2\, t^2 + \frac{1}{288}\, c1^2\, e2^2\, H^2\, t^2 +$$
$$\frac{1}{288}\, c2\, e2^2\, H^2\, t^2 + \frac{1}{96}\, c1\, e1\, e2^2\, H^2\, t^2 + \frac{1}{160}\, e1^2\, e2^2\, H^2\, t^2 - \frac{1}{720}\, e2^3\, H^2\, t^2 +$$
$$\frac{1}{96}\, c1\, c2\, e3\, H^2\, t^2 + \frac{1}{144}\, c1^2\, e1\, e3\, H^2\, t^2 + \frac{1}{144}\, c2\, e1\, e3\, H^2\, t^2 + \frac{1}{96}\, c1\, e1^2\, e3\, H^2\, t^2 +$$
$$\frac{1}{240}\, e1^3\, e3\, H^2\, t^2 - \frac{1}{96}\, c1\, e2\, e3\, H^2\, t^2 - \frac{1}{120}\, e1\, e2\, e3\, H^2\, t^2 + \frac{1}{480}\, e3^2\, H^2\, t^2 - \frac{1}{144}\, c1^2\, e4\, H^2\, t^2 -$$
$$\frac{1}{144}\, c2\, e4\, H^2\, t^2 - \frac{1}{96}\, c1\, e1\, e4\, H^2\, t^2 - \frac{1}{240}\, e1^2\, e4\, H^2\, t^2 + \frac{1}{240}\, e2\, e4\, H^2\, t^2 + \frac{1}{96}\, c1\, e5\, H^2\, t^2 +$$
$$\frac{1}{240}\, e1\, e5\, H^2\, t^2 - \frac{1}{240}\, e6\, H^2\, t^2 - \frac{1}{432}\, c1^3\, c2\, H^3\, t^3 + \frac{1}{144}\, c1\, c2^2\, H^3\, t^3 + \frac{1}{432}\, c1^2\, c3\, H^3\, t^3 -$$
$$\frac{1}{432}\, c1\, c4\, H^3\, t^3 - \frac{c1^4\, e1\, H^3\, t^3}{4320} + \frac{c1^2\, c2\, e1\, H^3\, t^3}{1080} + \frac{c2^2\, e1\, H^3\, t^3}{1440} + \frac{c1\, c3\, e1\, H^3\, t^3}{4320} -$$
$$\frac{c4\, e1\, H^3\, t^3}{4320} + \frac{1}{288}\, c1\, c2\, e1^2\, H^3\, t^3 + \frac{1}{432}\, c1^2\, e1^3\, H^3\, t^3 + \frac{1}{432}\, c2\, e1^3\, H^3\, t^3 + \frac{1}{288}\, c1\, e1^4\, H^3\, t^3 +$$
$$\frac{1}{720}\, e1^5\, H^3\, t^3 - \frac{1}{144}\, c1\, c2\, e2\, H^3\, t^3 - \frac{1}{144}\, c1^2\, e1\, e2\, H^3\, t^3 - \frac{1}{144}\, c2\, e1\, e2\, H^3\, t^3 -$$
$$\frac{1}{72}\, c1\, e1^2\, e2\, H^3\, t^3 - \frac{1}{144}\, e1^3\, e2\, H^3\, t^3 + \frac{1}{144}\, c1\, e2^2\, H^3\, t^3 + \frac{1}{144}\, e1\, e2^2\, H^3\, t^3 +$$
$$\frac{1}{144}\, c1^2\, e3\, H^3\, t^3 + \frac{1}{144}\, c2\, e3\, H^3\, t^3 + \frac{1}{72}\, c1\, e1\, e3\, H^3\, t^3 + \frac{1}{144}\, e1^2\, e3\, H^3\, t^3 - \frac{1}{144}\, e2\, e3\, H^3\, t^3 -$$
$$\frac{1}{72}\, c1\, e4\, H^3\, t^3 - \frac{1}{144}\, e1\, e4\, H^3\, t^3 + \frac{1}{144}\, e5\, H^3\, t^3 - \frac{1}{864}\, c1^4\, H^4\, t^4 + \frac{1}{216}\, c1^2\, c2\, H^4\, t^4 +$$
$$\frac{1}{288}\, c2^2\, H^4\, t^4 + \frac{1}{864}\, c1\, c3\, H^4\, t^4 - \frac{1}{864}\, c4\, H^4\, t^4 + \frac{1}{576}\, c1\, c2\, e1\, H^4\, t^4 + \frac{1}{576}\, c1^2\, e1^2\, H^4\, t^4 +$$
$$\frac{1}{576}\, c2\, e1^2\, H^4\, t^4 + \frac{1}{288}\, c1\, e1^3\, H^4\, t^4 + \frac{1}{576}\, e1^4\, H^4\, t^4 - \frac{1}{288}\, c1^2\, e2\, H^4\, t^4 - \frac{1}{288}\, c2\, e2\, H^4\, t^4 -$$
$$\frac{1}{96}\, c1\, e1\, e2\, H^4\, t^4 - \frac{1}{144}\, e1^2\, e2\, H^4\, t^4 + \frac{1}{288}\, e2^2\, H^4\, t^4 + \frac{1}{96}\, c1\, e3\, H^4\, t^4 + \frac{1}{144}\, e1\, e3\, H^4\, t^4 -$$
$$\frac{1}{144}\, e4\, H^4\, t^4 + \frac{1}{144}\, c1\, c2\, H^5\, t^5 + \frac{c1^2\, e1\, H^5\, t^5}{1440} + \frac{c2\, e1\, H^5\, t^5}{1440} + \frac{1}{480}\, c1\, e1^2\, H^5\, t^5 +$$
$$\frac{1}{720}\, e1^3\, H^5\, t^5 - \frac{1}{240}\, c1\, e2\, H^5\, t^5 - \frac{1}{240}\, e1\, e2\, H^5\, t^5 + \frac{1}{240}\, e3\, H^5\, t^5 + \frac{1}{432}\, c1^2\, H^6\, t^6 +$$
$$\frac{1}{432}\, c2\, H^6\, t^6 + \frac{c1\, e1\, H^6\, t^6}{1440} + \frac{e1^2\, H^6\, t^6}{1440} - \frac{1}{720}\, e2\, H^6\, t^6 + \frac{1}{504}\, c1\, H^7\, t^7 + \frac{e1\, H^7\, t^7}{5040} + \frac{H^8\, t^8}{2016}$$

In[111]:=

```
p1 =
 Expand[%109 /. {e1 → 5 * f1 ^ 2 + 4 * f2, e3 → 10 * f1 ^ 3 + 16 * f1 * f2 + 2 * f3,
    e4 → 5 * f1 ^ 4 + 24 * f1 ^ 2 * f2 + 6 * f2 ^ 2 + 9 * f1 * f3 - 2 * f4,
    e5 → f1 ^ 5 + 16 * f1 ^ 3 * f2 + 18 * f1 * f2 ^ 2 + 15 * f1 ^ 2 * f3 + 6 * f2 * f3 -
      4 * f1 * f4 - 10 * f5, e6 → 4 * f1 ^ 4 * f2 + 18 * f1 ^ 2 * f2 ^ 2 + 4 * f2 ^ 3 +
      11 * f1 ^ 3 * f3 + 21 * f1 * f2 * f3 - f1 ^ 2 * f4 - 2 * f2 * f4 - 29 * f1 * f5 - 26 * f6,
    e7 → 6 * f1 ^ 3 * f2 ^ 2 + 8 * f1 * f2 ^ 3 + 3 * f1 ^ 4 * f3 + 24 * f1 ^ 2 * f2 * f3 +
      6 * f2 ^ 2 * f3 + 3 * f1 * f3 ^ 2 + 2 * f1 ^ 3 * f4 + 2 * f1 * f2 * f4 -
      6 * f3 * f4 - 32 * f1 ^ 2 * f5 - 12 * f2 * f5 - 78 * f1 * f6,
    e8 → 4 * f1 ^ 2 * f2 ^ 3 + f2 ^ 4 + 9 * f1 ^ 3 * f2 * f3 + 15 * f1 * f2 ^ 2 * f3 +
      6 * f1 ^ 2 * f3 ^ 2 + f1 ^ 4 * f4 + 8 * f1 ^ 2 * f2 * f4 + 2 * f2 ^ 2 * f4 - 8 * f1 * f3 * f4 -
      7 * f4 ^ 2 - 16 * f1 ^ 3 * f5 - 26 * f1 * f2 * f5 - 3 * f3 * f5 - 94 * f1 ^ 2 * f6 - 24 * f2 * f6}]
```

Out[111]=

$$
\begin{aligned}
&-\frac{c1^8}{80\,640}+\frac{c1^6\,c2}{10\,080}-\frac{5\,c1^4\,c2^2}{24\,192}+\frac{c1^2\,c2^3}{30\,240}+\frac{c2^4}{11\,520}-\frac{c1^5\,c3}{17\,280}+\frac{13\,c1^3\,c2\,c3}{120\,960}+\frac{5\,c1\,c2^2\,c3}{24\,192}+\\
&\frac{c1^2\,c3^2}{80\,640}-\frac{c2\,c3^2}{30\,240}+\frac{c1^4\,c4}{17\,280}-\frac{19\,c1^2\,c2\,c4}{241\,920}-\frac{17\,c2^2\,c4}{120\,960}-\frac{13\,c1\,c3\,c4}{241\,920}+\frac{c4^2}{48\,384}-\\
&\frac{c1^3\,c5}{34\,560}-\frac{c1\,c2\,c5}{15\,120}+\frac{c3\,c5}{80\,640}+\frac{c1^2\,c6}{34\,560}+\frac{13\,c2\,c6}{241\,920}+\frac{c1\,c7}{80\,640}-\frac{c8}{80\,640}+\frac{c1^5\,c2\,f1}{12\,096}-\\
&\frac{5\,c1^3\,c2^2\,f1}{12\,096}+\frac{5\,c1\,c2^3\,f1}{12\,096}-\frac{c1^4\,c3\,f1}{12\,096}+\frac{11\,c1^2\,c2\,c3\,f1}{24\,192}-\frac{c1\,c3^2\,f1}{24\,192}+\frac{c1^3\,c4\,f1}{12\,096}-\\
&\frac{c1\,c2\,c4\,f1}{2688}-\frac{c1^2\,c5\,f1}{12\,096}+\frac{c1\,c6\,f1}{12\,096}+\frac{c1^6\,f1^2}{12\,096}-\frac{c1^4\,c2\,f1^2}{2016}+\frac{11\,c1^2\,c2^2\,f1^2}{24\,192}+\frac{5\,c2^3\,f1^2}{12\,096}+\\
&\frac{5\,c1^3\,c3\,f1^2}{24\,192}+\frac{11\,c1\,c2\,c3\,f1^2}{24\,192}-\frac{c3^2\,f1^2}{24\,192}-\frac{5\,c1^2\,c4\,f1^2}{24\,192}-\frac{c2\,c4\,f1^2}{2688}-\frac{c1\,c5\,f1^2}{12\,096}+\frac{c6\,f1^2}{12\,096}-\\
&\frac{c1^3\,c2\,f1^3}{1728}+\frac{1}{576}\,c1\,c2^2\,f1^3+\frac{c1^2\,c3\,f1^3}{1728}-\frac{c1\,c4\,f1^3}{1728}-\frac{c1^4\,f1^4}{3456}+\frac{1}{864}\,c1^2\,c2\,f1^4+\\
&\frac{c2^2\,f1^4}{1152}+\frac{c1\,c3\,f1^4}{3456}-\frac{c4\,f1^4}{3456}+\frac{1}{576}\,c1\,c2\,f1^5+\frac{c1^2\,f1^6}{1728}+\frac{c2\,f1^6}{1728}+\frac{c1\,f1^7}{2016}+\frac{f1^8}{8064}-\\
&\frac{c1^6\,f2}{7560}+\frac{c1^4\,c2\,f2}{1260}-\frac{11\,c1^2\,c2^2\,f2}{15\,120}-\frac{c2^3\,f2}{1512}-\frac{c1^3\,c3\,f2}{3024}-\frac{11\,c1\,c2\,c3\,f2}{15\,120}+\frac{c3^2\,f2}{15\,120}+\\
&\frac{c1^2\,c4\,f2}{3024}+\frac{c2\,c4\,f2}{1680}+\frac{c1\,c5\,f2}{7560}-\frac{c6\,f2}{7560}+\frac{1}{720}\,c1^3\,c2\,f1\,f2-\frac{1}{240}\,c1\,c2^2\,f1\,f2-\\
&\frac{1}{720}\,c1^2\,c3\,f1\,f2+\frac{1}{720}\,c1\,c4\,f1\,f2+\frac{c1^4\,f1^2\,f2}{1080}-\frac{1}{270}\,c1^2\,c2\,f1^2\,f2-\frac{1}{360}\,c2^2\,f1^2\,f2-\\
&\frac{c1\,c3\,f1^2\,f2}{1080}+\frac{c4\,f1^2\,f2}{1080}-\frac{1}{144}\,c1\,c2\,f1^3\,f2-\frac{1}{360}\,c1^2\,f1^4\,f2-\frac{1}{360}\,c2\,f1^4\,f2-\\
&\frac{1}{360}\,c1\,f1^5\,f2-\frac{f1^6\,f2}{1260}-\frac{c1^4\,f2^2}{2160}+\frac{1}{540}\,c1^2\,c2\,f2^2+\frac{c2^2\,f2^2}{720}+\frac{c1\,c3\,f2^2}{2160}-\frac{c4\,f2^2}{2160}+\\
&\frac{1}{144}\,c1\,c2\,f1\,f2^2+\frac{1}{240}\,c1^2\,f1^2\,f2^2+\frac{1}{240}\,c2\,f1^2\,f2^2+\frac{1}{180}\,c1\,f1^3\,f2^2+\frac{f1^4\,f2^2}{504}-\\
&\frac{c1^2\,f2^3}{1080}-\frac{c2\,f2^3}{1080}-\frac{1}{360}\,c1\,f1\,f2^3-\frac{f1^2\,f2^3}{630}+\frac{f2^4}{5040}-\frac{c1^3\,c2\,f3}{1440}+\frac{1}{480}\,c1\,c2^2\,f3+
\end{aligned}
$$

$$\frac{c1^2\,c3\,f3}{1440}-\frac{c1\,c4\,f3}{1440}-\frac{c1^4\,f1\,f3}{4320}+\frac{c1^2\,c2\,f1\,f3}{1080}+\frac{c2^2\,f1\,f3}{1440}+\frac{c1\,c3\,f1\,f3}{4320}-\frac{c4\,f1\,f3}{4320}-$$
$$\frac{c1^2\,f1^3\,f3}{1440}-\frac{c2\,f1^3\,f3}{1440}-\frac{1}{720}\,c1\,f1^4\,f3-\frac{f1^5\,f3}{1680}-\frac{1}{288}\,c1\,c2\,f2\,f3-\frac{1}{480}\,c1^2\,f1\,f2\,f3-$$
$$\frac{1}{480}\,c2\,f1\,f2\,f3-\frac{1}{480}\,c1\,f1^2\,f2\,f3-\frac{f1^3\,f2\,f3}{2520}+\frac{1}{720}\,c1\,f2^2\,f3+\frac{f1\,f2^2\,f3}{1008}+\frac{c1^2\,f3^2}{720}+$$
$$\frac{c2\,f3^2}{720}+\frac{1}{288}\,c1\,f1\,f3^2+\frac{19\,f1^2\,f3^2}{10\,080}-\frac{f2\,f3^2}{1260}-\frac{c1^4\,f4}{2160}+\frac{1}{540}\,c1^2\,c2\,f4+\frac{c2^2\,f4}{720}+$$
$$\frac{c1\,c3\,f4}{2160}-\frac{c4\,f4}{2160}+\frac{1}{96}\,c1\,c2\,f1\,f4+\frac{11\,c1^2\,f1^2\,f4}{1440}+\frac{11\,c2\,f1^2\,f4}{1440}+\frac{17\,c1\,f1^3\,f4}{1440}+$$
$$\frac{f1^4\,f4}{210}-\frac{1}{240}\,c1^2\,f2\,f4-\frac{c2\,f2\,f4}{240}-\frac{1}{72}\,c1\,f1\,f2\,f4-\frac{11\,f1^2\,f2\,f4}{1260}+\frac{f2^2\,f4}{504}-\frac{c1\,f3\,f4}{720}-$$
$$\frac{f1\,f3\,f4}{630}+\frac{f4^2}{560}-\frac{5\,c1\,c2\,f5}{288}-\frac{7}{480}\,c1^2\,f1\,f5-\frac{7\,c2\,f1\,f5}{480}-\frac{37\,c1\,f1^2\,f5}{1440}-\frac{59\,f1^3\,f5}{5040}+$$
$$\frac{7\,c1\,f2\,f5}{360}+\frac{f1\,f2\,f5}{56}-\frac{17\,f3\,f5}{5040}+\frac{13\,c1^2\,f6}{720}+\frac{13\,c2\,f6}{720}+\frac{13\,c1\,f1\,f6}{360}+\frac{47\,f1^2\,f6}{2520}-$$
$$\frac{f2\,f6}{63}+\frac{c1^5\,c2\,H\,t}{4032}-\frac{5\,c1^3\,c2^2\,H\,t}{4032}+\frac{5\,c1\,c2^3\,H\,t}{4032}-\frac{c1^4\,c3\,H\,t}{4032}+\frac{11\,c1^2\,c2\,c3\,H\,t}{8064}-$$
$$\frac{c1\,c3^2\,H\,t}{8064}+\frac{c1^3\,c4\,H\,t}{4032}-\frac{1}{896}\,c1\,c2\,c4\,H\,t-\frac{c1^2\,c5\,H\,t}{4032}+\frac{c1\,c6\,H\,t}{4032}+\frac{c1^6\,f1\,H\,t}{6048}-$$
$$\frac{c1^4\,c2\,f1\,H\,t}{1008}+\frac{11\,c1^2\,c2^2\,f1\,H\,t}{12\,096}+\frac{5\,c2^3\,f1\,H\,t}{6048}+\frac{5\,c1^3\,c3\,f1\,H\,t}{12\,096}+\frac{11\,c1\,c2\,c3\,f1\,H\,t}{12\,096}-$$
$$\frac{c3^2\,f1\,H\,t}{12\,096}-\frac{5\,c1^2\,c4\,f1\,H\,t}{12\,096}-\frac{c2\,c4\,f1\,H\,t}{1344}-\frac{c1\,c5\,f1\,H\,t}{6048}+\frac{c6\,f1\,H\,t}{6048}-\frac{1}{576}\,c1^3\,c2\,f1^2\,H\,t+$$
$$\frac{1}{192}\,c1\,c2^2\,f1^2\,H\,t+\frac{1}{576}\,c1^2\,c3\,f1^2\,H\,t-\frac{1}{576}\,c1\,c4\,f1^2\,H\,t-\frac{1}{864}\,c1^4\,f1^3\,H\,t+$$
$$\frac{1}{216}\,c1^2\,c2\,f1^3\,H\,t+\frac{1}{288}\,c2^2\,f1^3\,H\,t+\frac{1}{864}\,c1\,c3\,f1^3\,H\,t-\frac{1}{864}\,c4\,f1^3\,H\,t+$$
$$\frac{5}{576}\,c1\,c2\,f1^4\,H\,t+\frac{1}{288}\,c1^2\,f1^5\,H\,t+\frac{1}{288}\,c2\,f1^5\,H\,t+\frac{1}{288}\,c1\,f1^6\,H\,t+\frac{f1^7\,H\,t}{1008}+$$
$$\frac{1}{360}\,c1^3\,c2\,f2\,H\,t-\frac{1}{120}\,c1\,c2^2\,f2\,H\,t-\frac{1}{360}\,c1^2\,c3\,f2\,H\,t+\frac{1}{360}\,c1\,c4\,f2\,H\,t+$$
$$\frac{1}{360}\,c1^4\,f1\,f2\,H\,t-\frac{1}{90}\,c1^2\,c2\,f1\,f2\,H\,t-\frac{1}{120}\,c2^2\,f1\,f2\,H\,t-\frac{1}{360}\,c1\,c3\,f1\,f2\,H\,t+$$
$$\frac{1}{360}\,c4\,f1\,f2\,H\,t-\frac{1}{36}\,c1\,c2\,f1^2\,f2\,H\,t-\frac{1}{72}\,c1^2\,f1^3\,f2\,H\,t-\frac{1}{72}\,c2\,f1^3\,f2\,H\,t-$$
$$\frac{1}{60}\,c1\,f1^4\,f2\,H\,t-\frac{1}{180}\,f1^5\,f2\,H\,t+\frac{1}{72}\,c1\,c2\,f2^2\,H\,t+\frac{1}{72}\,c1^2\,f1\,f2^2\,H\,t+$$
$$\frac{1}{72}\,c2\,f1\,f2^2\,H\,t+\frac{1}{40}\,c1\,f1^2\,f2^2\,H\,t+\frac{1}{90}\,f1^3\,f2^2\,H\,t-\frac{1}{180}\,c1\,f2^3\,H\,t-\frac{1}{180}\,f1\,f2^3\,H\,t-$$
$$\frac{1}{720}\,c1^4\,f3\,H\,t+\frac{1}{180}\,c1^2\,c2\,f3\,H\,t+\frac{1}{240}\,c2^2\,f3\,H\,t+\frac{1}{720}\,c1\,c3\,f3\,H\,t-\frac{1}{720}\,c4\,f3\,H\,t+$$
$$\frac{1}{144}\,c1\,c2\,f1\,f3\,H\,t-\frac{1}{240}\,c1\,f1^3\,f3\,H\,t-\frac{1}{360}\,f1^4\,f3\,H\,t-\frac{1}{144}\,c1^2\,f2\,f3\,H\,t-$$

$$\frac{1}{144} c2\, f2\, f3\, H\, t - \frac{1}{80} c1\, f1\, f2\, f3\, H\, t - \frac{1}{240} f1^2\, f2\, f3\, H\, t + \frac{1}{360} f2^2\, f3\, H\, t + \frac{1}{120} c1\, f3^2\, H\, t +$$
$$\frac{1}{144} f1\, f3^2\, H\, t + \frac{1}{72} c1\, c2\, f4\, H\, t + \frac{1}{48} c1^2\, f1\, f4\, H\, t + \frac{1}{48} c2\, f1\, f4\, H\, t + \frac{11}{240} c1\, f1^2\, f4\, H\, t +$$
$$\frac{17}{720} f1^3\, f4\, H\, t - \frac{1}{40} c1\, f2\, f4\, H\, t - \frac{1}{36} f1\, f2\, f4\, H\, t - \frac{1}{360} f3\, f4\, H\, t - \frac{5}{144} c1^2\, f5\, H\, t -$$
$$\frac{5}{144} c2\, f5\, H\, t - \frac{7}{80} c1\, f1\, f5\, H\, t - \frac{37}{720} f1^2\, f5\, H\, t + \frac{7}{180} f2\, f5\, H\, t + \frac{13}{120} c1\, f6\, H\, t +$$
$$\frac{13}{180} f1\, f6\, H\, t + \frac{c1^6\, H^2\, t^2}{4032} - \frac{1}{672} c1^4\, c2\, H^2\, t^2 + \frac{11\, c1^2\, c2^2\, H^2\, t^2}{8064} + \frac{5\, c2^3\, H^2\, t^2}{4032} +$$
$$\frac{5\, c1^3\, c3\, H^2\, t^2}{8064} + \frac{11\, c1\, c2\, c3\, H^2\, t^2}{8064} - \frac{c3^2\, H^2\, t^2}{8064} - \frac{5\, c1^2\, c4\, H^2\, t^2}{8064} - \frac{1}{896} c2\, c4\, H^2\, t^2 -$$
$$\frac{c1\, c5\, H^2\, t^2}{4032} + \frac{c6\, H^2\, t^2}{4032} - \frac{1}{576} c1^3\, c2\, f1\, H^2\, t^2 + \frac{1}{192} c1\, c2^2\, f1\, H^2\, t^2 + \frac{1}{576} c1^2\, c3\, f1\, H^2\, t^2 -$$
$$\frac{1}{576} c1\, c4\, f1\, H^2\, t^2 - \frac{1}{576} c1^4\, f1^2\, H^2\, t^2 + \frac{1}{144} c1^2\, c2\, f1^2\, H^2\, t^2 + \frac{1}{192} c2^2\, f1^2\, H^2\, t^2 +$$
$$\frac{1}{576} c1\, c3\, f1^2\, H^2\, t^2 - \frac{1}{576} c4\, f1^2\, H^2\, t^2 + \frac{5}{288} c1\, c2\, f1^3\, H^2\, t^2 + \frac{5}{576} c1^2\, f1^4\, H^2\, t^2 +$$
$$\frac{5}{576} c2\, f1^4\, H^2\, t^2 + \frac{1}{96} c1\, f1^5\, H^2\, t^2 + \frac{1}{288} f1^6\, H^2\, t^2 + \frac{1}{360} c1^4\, f2\, H^2\, t^2 - \frac{1}{90} c1^2\, c2\, f2\, H^2\, t^2 -$$
$$\frac{1}{120} c2^2\, f2\, H^2\, t^2 - \frac{1}{360} c1\, c3\, f2\, H^2\, t^2 + \frac{1}{360} c4\, f2\, H^2\, t^2 - \frac{1}{24} c1\, c2\, f1\, f2\, H^2\, t^2 -$$
$$\frac{1}{36} c1^2\, f1^2\, f2\, H^2\, t^2 - \frac{1}{36} c2\, f1^2\, f2\, H^2\, t^2 - \frac{1}{24} c1\, f1^3\, f2\, H^2\, t^2 - \frac{1}{60} f1^4\, f2\, H^2\, t^2 +$$
$$\frac{1}{72} c1^2\, f2^2\, H^2\, t^2 + \frac{1}{72} c2\, f2^2\, H^2\, t^2 + \frac{1}{24} c1\, f1\, f2^2\, H^2\, t^2 + \frac{1}{40} f1^2\, f2^2\, H^2\, t^2 - \frac{1}{180} f2^3\, H^2\, t^2 +$$
$$\frac{1}{48} c1\, c2\, f3\, H^2\, t^2 + \frac{1}{144} c1^2\, f1\, f3\, H^2\, t^2 + \frac{1}{144} c2\, f1\, f3\, H^2\, t^2 - \frac{1}{240} f1^3\, f3\, H^2\, t^2 -$$
$$\frac{1}{48} c1\, f2\, f3\, H^2\, t^2 - \frac{1}{80} f1\, f2\, f3\, H^2\, t^2 + \frac{1}{120} f3^2\, H^2\, t^2 + \frac{1}{72} c1^2\, f4\, H^2\, t^2 + \frac{1}{72} c2\, f4\, H^2\, t^2 +$$
$$\frac{1}{16} c1\, f1\, f4\, H^2\, t^2 + \frac{11}{240} f1^2\, f4\, H^2\, t^2 - \frac{1}{40} f2\, f4\, H^2\, t^2 - \frac{5}{48} c1\, f5\, H^2\, t^2 - \frac{7}{80} f1\, f5\, H^2\, t^2 +$$
$$\frac{13}{120} f6\, H^2\, t^2 - \frac{1}{576} c1^3\, c2\, H^3\, t^3 + \frac{1}{192} c1\, c2^2\, H^3\, t^3 + \frac{1}{576} c1^2\, c3\, H^3\, t^3 - \frac{1}{576} c1\, c4\, H^3\, t^3 -$$
$$\frac{1}{864} c1^4\, f1\, H^3\, t^3 + \frac{1}{216} c1^2\, c2\, f1\, H^3\, t^3 + \frac{1}{288} c2^2\, f1\, H^3\, t^3 + \frac{1}{864} c1\, c3\, f1\, H^3\, t^3 -$$
$$\frac{1}{864} c4\, f1\, H^3\, t^3 + \frac{5}{288} c1\, c2\, f1^2\, H^3\, t^3 + \frac{5}{432} c1^2\, f1^3\, H^3\, t^3 + \frac{5}{432} c2\, f1^3\, H^3\, t^3 +$$
$$\frac{5}{288} c1\, f1^4\, H^3\, t^3 + \frac{1}{144} f1^5\, H^3\, t^3 - \frac{1}{36} c1\, c2\, f2\, H^3\, t^3 - \frac{1}{36} c1^2\, f1\, f2\, H^3\, t^3 -$$
$$\frac{1}{36} c2\, f1\, f2\, H^3\, t^3 - \frac{1}{18} c1\, f1^2\, f2\, H^3\, t^3 - \frac{1}{36} f1^3\, f2\, H^3\, t^3 + \frac{1}{36} c1\, f2^2\, H^3\, t^3 + \frac{1}{36} f1\, f2^2\, H^3\, t^3 +$$
$$\frac{1}{72} c1^2\, f3\, H^3\, t^3 + \frac{1}{72} c2\, f3\, H^3\, t^3 + \frac{1}{72} c1\, f1\, f3\, H^3\, t^3 - \frac{1}{72} f2\, f3\, H^3\, t^3 + \frac{1}{36} c1\, f4\, H^3\, t^3 +$$
$$\frac{1}{24} f1\, f4\, H^3\, t^3 - \frac{5}{72} f5\, H^3\, t^3 - \frac{c1^4\, H^4\, t^4}{1152} + \frac{1}{288} c1^2\, c2\, H^4\, t^4 + \frac{1}{384} c2^2\, H^4\, t^4 +$$

$$\frac{c1\,c3\,H^4\,t^4}{1152} - \frac{c4\,H^4\,t^4}{1152} + \frac{5}{576}\,c1\,c2\,f1\,H^4\,t^4 + \frac{5}{576}\,c1^2\,f1^2\,H^4\,t^4 + \frac{5}{576}\,c2\,f1^2\,H^4\,t^4 +$$
$$\frac{5}{288}\,c1\,f1^3\,H^4\,t^4 + \frac{5}{576}\,f1^4\,H^4\,t^4 - \frac{1}{72}\,c1^2\,f2\,H^4\,t^4 - \frac{1}{72}\,c2\,f2\,H^4\,t^4 - \frac{1}{24}\,c1\,f1\,f2\,H^4\,t^4 -$$
$$\frac{1}{36}\,f1^2\,f2\,H^4\,t^4 + \frac{1}{72}\,f2^2\,H^4\,t^4 + \frac{1}{48}\,c1\,f3\,H^4\,t^4 + \frac{1}{144}\,f1\,f3\,H^4\,t^4 + \frac{1}{72}\,f4\,H^4\,t^4 +$$
$$\frac{1}{192}\,c1\,c2\,H^5\,t^5 + \frac{1}{288}\,c1^2\,f1\,H^5\,t^5 + \frac{1}{288}\,c2\,f1\,H^5\,t^5 + \frac{1}{96}\,c1\,f1^2\,H^5\,t^5 + \frac{1}{144}\,f1^3\,H^5\,t^5 -$$
$$\frac{1}{60}\,c1\,f2\,H^5\,t^5 - \frac{1}{60}\,f1\,f2\,H^5\,t^5 + \frac{1}{120}\,f3\,H^5\,t^5 + \frac{1}{576}\,c1^2\,H^6\,t^6 + \frac{1}{576}\,c2\,H^6\,t^6 +$$
$$\frac{1}{288}\,c1\,f1\,H^6\,t^6 + \frac{1}{288}\,f1^2\,H^6\,t^6 - \frac{1}{180}\,f2\,H^6\,t^6 + \frac{1}{672}\,c1\,H^7\,t^7 + \frac{f1\,H^7\,t^7}{1008} + \frac{H^8\,t^8}{2688}$$

In[112]:=

```
p2 = Expand[%110 /. {e1 → 10 * f1, e2 → 45 * f1 ^ 2 + 6 * f2, e3 → 120 * f1 ^ 3 + 54 * f1 * f2,
    e4 → 210 * f1 ^ 4 + 216 * f1 ^ 2 * f2 + 15 * f2 ^ 2 + 3 * f1 * f3 - 6 * f4,
    e5 → 252 * f1 ^ 5 + 504 * f1 ^ 3 * f2 + 120 * f1 * f2 ^ 2 + 24 * f1 ^ 2 * f3 - 48 * f1 * f4,
    e6 → 210 * f1 ^ 6 + 756 * f1 ^ 4 * f2 + 420 * f1 ^ 2 * f2 ^ 2 + 20 * f2 ^ 3 + 84 * f1 ^ 3 * f3 +
      15 * f1 * f2 * f3 - 3 * f3 ^ 2 - 169 * f1 ^ 2 * f4 - 22 * f2 * f4 - 11 * f1 * f5 + 66 * f6,
    e7 → 120 * f1 ^ 7 + 756 * f1 ^ 5 * f2 + 840 * f1 ^ 3 * f2 ^ 2 + 140 * f1 * f2 ^ 3 +
      168 * f1 ^ 4 * f3 + 105 * f1 ^ 2 * f2 * f3 - 21 * f1 * f3 ^ 2 -
      343 * f1 ^ 3 * f4 - 154 * f1 * f2 * f4 - 77 * f1 ^ 2 * f5 + 462 * f1 * f6,
    e8 → 45 * f1 ^ 8 + 504 * f1 ^ 6 * f2 + 1050 * f1 ^ 4 * f2 ^ 2 + 420 * f1 ^ 2 * f2 ^ 3 +
      15 * f2 ^ 4 + 210 * f1 ^ 5 * f3 + 315 * f1 ^ 3 * f2 * f3 + 30 * f1 * f2 ^ 2 * f3 -
      60 * f1 ^ 2 * f3 ^ 2 - 12 * f2 * f3 ^ 2 - 441 * f1 ^ 4 * f4 - 465 * f1 ^ 2 * f2 * f4 -
      28 * f2 ^ 2 * f4 - 13 * f1 * f3 * f4 + f4 ^ 2 - 234 * f1 ^ 3 * f5 -
      47 * f1 * f2 * f5 + 36 * f3 * f5 + 1444 * f1 ^ 2 * f6 + 138 * f2 * f6}]
```

Out[112]=

$$-\frac{c1^8}{60\,480} + \frac{c1^6\,c2}{7560} - \frac{5\,c1^4\,c2^2}{18\,144} + \frac{c1^2\,c2^3}{22\,680} + \frac{c2^4}{8640} - \frac{c1^5\,c3}{12\,960} + \frac{13\,c1^3\,c2\,c3}{90\,720} + \frac{5\,c1\,c2^2\,c3}{18\,144} +$$
$$\frac{c1^2\,c3^2}{60\,480} - \frac{c2\,c3^2}{22\,680} + \frac{c1^4\,c4}{12\,960} - \frac{19\,c1^2\,c2\,c4}{181\,440} - \frac{17\,c2^2\,c4}{90\,720} - \frac{13\,c1\,c3\,c4}{181\,440} + \frac{c4^2}{36\,288} -$$
$$\frac{c1^3\,c5}{25\,920} - \frac{c1\,c2\,c5}{11\,340} + \frac{c3\,c5}{60\,480} + \frac{c1^2\,c6}{25\,920} + \frac{13\,c2\,c6}{181\,440} + \frac{c1\,c7}{60\,480} - \frac{c8}{60\,480} + \frac{c1^5\,c2\,f1}{6048} -$$
$$\frac{5\,c1^3\,c2^2\,f1}{6048} + \frac{5\,c1\,c2^3\,f1}{6048} - \frac{c1^4\,c3\,f1}{6048} + \frac{11\,c1^2\,c2\,c3\,f1}{12\,096} - \frac{c1\,c3^2\,f1}{12\,096} + \frac{c1^3\,c4\,f1}{6048} -$$
$$\frac{c1\,c2\,c4\,f1}{1344} - \frac{c1^2\,c5\,f1}{6048} + \frac{c1\,c6\,f1}{6048} + \frac{c1^6\,f1^2}{6048} - \frac{c1^4\,c2\,f1^2}{1008} + \frac{11\,c1^2\,c2^2\,f1^2}{12\,096} + \frac{5\,c2^3\,f1^2}{6048} +$$
$$\frac{5\,c1^3\,c3\,f1^2}{12\,096} + \frac{11\,c1\,c2\,c3\,f1^2}{12\,096} - \frac{c3^2\,f1^2}{12\,096} - \frac{5\,c1^2\,c4\,f1^2}{12\,096} - \frac{c2\,c4\,f1^2}{1344} - \frac{c1\,c5\,f1^2}{6048} +$$
$$\frac{c6\,f1^2}{6048} - \frac{1}{864}\,c1^3\,c2\,f1^3 + \frac{1}{288}\,c1\,c2^2\,f1^3 + \frac{1}{864}\,c1^2\,c3\,f1^3 - \frac{1}{864}\,c1\,c4\,f1^3 - \frac{c1^4\,f1^4}{1728} +$$
$$\frac{1}{432}\,c1^2\,c2\,f1^4 + \frac{c2^2\,f1^4}{576} + \frac{c1\,c3\,f1^4}{1728} - \frac{c4\,f1^4}{1728} + \frac{1}{288}\,c1\,c2\,f1^5 + \frac{c1^2\,f1^6}{864} + \frac{c2\,f1^6}{864} +$$
$$\frac{c1\,f1^7}{1008} + \frac{f1^8}{4032} - \frac{c1^6\,f2}{5040} + \frac{1}{840}\,c1^4\,c2\,f2 - \frac{11\,c1^2\,c2^2\,f2}{10\,080} - \frac{c2^3\,f2}{1008} - \frac{c1^3\,c3\,f2}{2016} -$$

$$\frac{11\,c1\,c2\,c3\,f2}{10\,080}+\frac{c3^2\,f2}{10\,080}+\frac{c1^2\,c4\,f2}{2016}+\frac{c2\,c4\,f2}{1120}+\frac{c1\,c5\,f2}{5040}-\frac{c6\,f2}{5040}+\frac{1}{480}\,c1^3\,c2\,f1\,f2-$$
$$\frac{1}{160}\,c1\,c2^2\,f1\,f2-\frac{1}{480}\,c1^2\,c3\,f1\,f2+\frac{1}{480}\,c1\,c4\,f1\,f2+\frac{1}{720}\,c1^4\,f1^2\,f2-$$
$$\frac{1}{180}\,c1^2\,c2\,f1^2\,f2-\frac{1}{240}\,c2^2\,f1^2\,f2-\frac{1}{720}\,c1\,c3\,f1^2\,f2+\frac{1}{720}\,c4\,f1^2\,f2-\frac{1}{96}\,c1\,c2\,f1^3\,f2-$$
$$\frac{1}{240}\,c1^2\,f1^4\,f2-\frac{1}{240}\,c2\,f1^4\,f2-\frac{1}{240}\,c1\,f1^5\,f2-\frac{f1^6\,f2}{840}-\frac{c1^4\,f2^2}{1440}+\frac{1}{360}\,c1^2\,c2\,f2^2+$$
$$\frac{c2^2\,f2^2}{480}+\frac{c1\,c3\,f2^2}{1440}-\frac{c4\,f2^2}{1440}+\frac{1}{96}\,c1\,c2\,f1\,f2^2+\frac{1}{160}\,c1^2\,f1^2\,f2^2+\frac{1}{160}\,c2\,f1^2\,f2^2+$$
$$\frac{1}{120}\,c1\,f1^3\,f2^2+\frac{f1^4\,f2^2}{336}-\frac{c1^2\,f2^3}{720}-\frac{c2\,f2^3}{720}-\frac{1}{240}\,c1\,f1\,f2^3-\frac{f1^2\,f2^3}{420}+\frac{f2^4}{3360}+$$
$$\frac{c1^4\,f1\,f3}{1440}-\frac{1}{360}\,c1^2\,c2\,f1\,f3-\frac{1}{480}\,c2^2\,f1\,f3-\frac{c1\,c3\,f1\,f3}{1440}+\frac{c4\,f1\,f3}{1440}-\frac{1}{96}\,c1\,c2\,f1^2\,f3-$$
$$\frac{1}{160}\,c1^2\,f1^3\,f3-\frac{1}{160}\,c2\,f1^3\,f3-\frac{1}{120}\,c1\,f1^4\,f3-\frac{f1^5\,f3}{336}+\frac{1}{480}\,c1^2\,f1\,f2\,f3+$$
$$\frac{1}{480}\,c2\,f1\,f2\,f3+\frac{1}{160}\,c1\,f1^2\,f2\,f3+\frac{1}{280}\,f1^3\,f2\,f3-\frac{f1\,f2^2\,f3}{1680}+\frac{c1^2\,f3^2}{480}+\frac{c2\,f3^2}{480}+$$
$$\frac{1}{160}\,c1\,f1\,f3^2+\frac{13\,f1^2\,f3^2}{3360}-\frac{f2\,f3^2}{840}-\frac{c1^4\,f4}{720}+\frac{1}{180}\,c1^2\,c2\,f4+\frac{c2^2\,f4}{240}+\frac{c1\,c3\,f4}{720}-$$
$$\frac{c4\,f4}{720}+\frac{1}{48}\,c1\,c2\,f1\,f4+\frac{19\,c1^2\,f1^2\,f4}{1440}+\frac{19\,c2\,f1^2\,f4}{1440}+\frac{3}{160}\,c1\,f1^3\,f4+\frac{f1^4\,f4}{140}-$$
$$\frac{7}{720}\,c1^2\,f2\,f4-\frac{7\,c2\,f2\,f4}{720}-\frac{7}{240}\,c1\,f1\,f2\,f4-\frac{29\,f1^2\,f2\,f4}{1680}+\frac{11\,f2^2\,f4}{2520}-\frac{f1\,f3\,f4}{1008}+$$
$$\frac{17\,f4^2}{5040}+\frac{11\,c1^2\,f1\,f5}{1440}+\frac{11\,c2\,f1\,f5}{1440}+\frac{11}{480}\,c1\,f1^2\,f5+\frac{23\,f1^3\,f5}{1680}-\frac{19\,f1\,f2\,f5}{5040}-\frac{f3\,f5}{140}-$$
$$\frac{11\,c1^2\,f6}{240}-\frac{11\,c2\,f6}{240}-\frac{11\,c1\,f1\,f6}{80}-\frac{227\,f1^2\,f6}{2520}+\frac{43\,f2\,f6}{840}+\frac{c1^5\,c2\,H\,t}{3024}-\frac{5\,c1^3\,c2^2\,H\,t}{3024}+$$
$$\frac{5\,c1\,c2^3\,H\,t}{3024}-\frac{c1^4\,c3\,H\,t}{3024}+\frac{11\,c1^2\,c2\,c3\,H\,t}{6048}-\frac{c1\,c3^2\,H\,t}{6048}+\frac{c1^3\,c4\,H\,t}{3024}-\frac{1}{672}\,c1\,c2\,c4\,H\,t-$$
$$\frac{c1^2\,c5\,H\,t}{3024}+\frac{c1\,c6\,H\,t}{3024}+\frac{c1^6\,f1\,H\,t}{3024}-\frac{1}{504}\,c1^4\,c2\,f1\,H\,t+\frac{11\,c1^2\,c2^2\,f1\,H\,t}{6048}+\frac{5\,c2^3\,f1\,H\,t}{3024}+$$
$$\frac{5\,c1^3\,c3\,f1\,H\,t}{6048}+\frac{11\,c1\,c2\,c3\,f1\,H\,t}{6048}-\frac{c3^2\,f1\,H\,t}{6048}-\frac{5\,c1^2\,c4\,f1\,H\,t}{6048}-\frac{1}{672}\,c2\,c4\,f1\,H\,t-$$
$$\frac{c1\,c5\,f1\,H\,t}{3024}+\frac{c6\,f1\,H\,t}{3024}-\frac{1}{288}\,c1^3\,c2\,f1^2\,H\,t+\frac{1}{96}\,c1\,c2^2\,f1^2\,H\,t+\frac{1}{288}\,c1^2\,c3\,f1^2\,H\,t-$$
$$\frac{1}{288}\,c1\,c4\,f1^2\,H\,t-\frac{1}{432}\,c1^4\,f1^3\,H\,t+\frac{1}{108}\,c1^2\,c2\,f1^3\,H\,t+\frac{1}{144}\,c2^2\,f1^3\,H\,t+$$
$$\frac{1}{432}\,c1\,c3\,f1^3\,H\,t-\frac{1}{432}\,c4\,f1^3\,H\,t+\frac{5}{288}\,c1\,c2\,f1^4\,H\,t+\frac{1}{144}\,c1^2\,f1^5\,H\,t+\frac{1}{144}\,c2\,f1^5\,H\,t+$$
$$\frac{1}{144}\,c1\,f1^6\,H\,t+\frac{1}{504}\,f1^7\,H\,t+\frac{1}{240}\,c1^3\,c2\,f2\,H\,t-\frac{1}{80}\,c1\,c2^2\,f2\,H\,t-\frac{1}{240}\,c1^2\,c3\,f2\,H\,t+$$
$$\frac{1}{240}\,c1\,c4\,f2\,H\,t+\frac{1}{240}\,c1^4\,f1\,f2\,H\,t-\frac{1}{60}\,c1^2\,c2\,f1\,f2\,H\,t-\frac{1}{80}\,c2^2\,f1\,f2\,H\,t-$$

$$\frac{1}{240}\, c1\, c3\, f1\, f2\, H\, t + \frac{1}{240}\, c4\, f1\, f2\, H\, t - \frac{1}{24}\, c1\, c2\, f1^2\, f2\, H\, t - \frac{1}{48}\, c1^2\, f1^3\, f2\, H\, t -$$
$$\frac{1}{48}\, c2\, f1^3\, f2\, H\, t - \frac{1}{40}\, c1\, f1^4\, f2\, H\, t - \frac{1}{120}\, f1^5\, f2\, H\, t + \frac{1}{48}\, c1\, c2\, f2^2\, H\, t + \frac{1}{48}\, c1^2\, f1\, f2^2\, H\, t +$$
$$\frac{1}{48}\, c2\, f1\, f2^2\, H\, t + \frac{3}{80}\, c1\, f1^2\, f2^2\, H\, t + \frac{1}{60}\, f1^3\, f2^2\, H\, t - \frac{1}{120}\, c1\, f2^3\, H\, t - \frac{1}{120}\, f1\, f2^3\, H\, t -$$
$$\frac{1}{48}\, c1\, c2\, f1\, f3\, H\, t - \frac{1}{48}\, c1^2\, f1^2\, f3\, H\, t - \frac{1}{48}\, c2\, f1^2\, f3\, H\, t - \frac{3}{80}\, c1\, f1^3\, f3\, H\, t - \frac{1}{60}\, f1^4\, f3\, H\, t +$$
$$\frac{1}{80}\, c1\, f1\, f2\, f3\, H\, t + \frac{1}{80}\, f1^2\, f2\, f3\, H\, t + \frac{1}{80}\, c1\, f3^2\, H\, t + \frac{1}{80}\, f1\, f3^2\, H\, t + \frac{1}{24}\, c1\, c2\, f4\, H\, t +$$
$$\frac{1}{24}\, c1^2\, f1\, f4\, H\, t + \frac{1}{24}\, c2\, f1\, f4\, H\, t + \frac{19}{240}\, c1\, f1^2\, f4\, H\, t + \frac{3}{80}\, f1^3\, f4\, H\, t - \frac{7}{120}\, c1\, f2\, f4\, H\, t -$$
$$\frac{7}{120}\, f1\, f2\, f4\, H\, t + \frac{11}{240}\, c1\, f1\, f5\, H\, t + \frac{11}{240}\, f1^2\, f5\, H\, t - \frac{11}{40}\, c1\, f6\, H\, t - \frac{11}{40}\, f1\, f6\, H\, t +$$
$$\frac{c1^6\, H^2\, t^2}{3024} - \frac{1}{504}\, c1^4\, c2\, H^2\, t^2 + \frac{11\, c1^2\, c2^2\, H^2\, t^2}{6048} + \frac{5\, c2^3\, H^2\, t^2}{3024} + \frac{5\, c1^3\, c3\, H^2\, t^2}{6048} +$$
$$\frac{11\, c1\, c2\, c3\, H^2\, t^2}{6048} - \frac{c3^2\, H^2\, t^2}{6048} - \frac{5\, c1^2\, c4\, H^2\, t^2}{6048} - \frac{1}{672}\, c2\, c4\, H^2\, t^2 - \frac{c1\, c5\, H^2\, t^2}{3024} + \frac{c6\, H^2\, t^2}{3024} -$$
$$\frac{1}{288}\, c1^3\, c2\, f1\, H^2\, t^2 + \frac{1}{96}\, c1\, c2^2\, f1\, H^2\, t^2 + \frac{1}{288}\, c1^2\, c3\, f1\, H^2\, t^2 - \frac{1}{288}\, c1\, c4\, f1\, H^2\, t^2 -$$
$$\frac{1}{288}\, c1^4\, f1^2\, H^2\, t^2 + \frac{1}{72}\, c1^2\, c2\, f1^2\, H^2\, t^2 + \frac{1}{96}\, c2^2\, f1^2\, H^2\, t^2 + \frac{1}{288}\, c1\, c3\, f1^2\, H^2\, t^2 -$$
$$\frac{1}{288}\, c4\, f1^2\, H^2\, t^2 + \frac{5}{144}\, c1\, c2\, f1^3\, H^2\, t^2 + \frac{5}{288}\, c1^2\, f1^4\, H^2\, t^2 + \frac{5}{288}\, c2\, f1^4\, H^2\, t^2 +$$
$$\frac{1}{48}\, c1\, f1^5\, H^2\, t^2 + \frac{1}{144}\, f1^6\, H^2\, t^2 + \frac{1}{240}\, c1^4\, f2\, H^2\, t^2 - \frac{1}{60}\, c1^2\, c2\, f2\, H^2\, t^2 - \frac{1}{80}\, c2^2\, f2\, H^2\, t^2 -$$
$$\frac{1}{240}\, c1\, c3\, f2\, H^2\, t^2 + \frac{1}{240}\, c4\, f2\, H^2\, t^2 - \frac{1}{16}\, c1\, c2\, f1\, f2\, H^2\, t^2 - \frac{1}{24}\, c1^2\, f1^2\, f2\, H^2\, t^2 -$$
$$\frac{1}{24}\, c2\, f1^2\, f2\, H^2\, t^2 - \frac{1}{16}\, c1\, f1^3\, f2\, H^2\, t^2 - \frac{1}{40}\, f1^4\, f2\, H^2\, t^2 + \frac{1}{48}\, c1^2\, f2^2\, H^2\, t^2 +$$
$$\frac{1}{48}\, c2\, f2^2\, H^2\, t^2 + \frac{1}{16}\, c1\, f1\, f2^2\, H^2\, t^2 + \frac{3}{80}\, f1^2\, f2^2\, H^2\, t^2 - \frac{1}{120}\, f2^3\, H^2\, t^2 - \frac{1}{48}\, c1^2\, f1\, f3\, H^2\, t^2 -$$
$$\frac{1}{48}\, c2\, f1\, f3\, H^2\, t^2 - \frac{1}{16}\, c1\, f1^2\, f3\, H^2\, t^2 - \frac{3}{80}\, f1^3\, f3\, H^2\, t^2 + \frac{1}{80}\, f1\, f2\, f3\, H^2\, t^2 + \frac{1}{80}\, f3^2\, H^2\, t^2 +$$
$$\frac{1}{24}\, c1^2\, f4\, H^2\, t^2 + \frac{1}{24}\, c2\, f4\, H^2\, t^2 + \frac{1}{8}\, c1\, f1\, f4\, H^2\, t^2 + \frac{19}{240}\, f1^2\, f4\, H^2\, t^2 - \frac{7}{120}\, f2\, f4\, H^2\, t^2 +$$
$$\frac{11}{240}\, f1\, f5\, H^2\, t^2 - \frac{11}{40}\, f6\, H^2\, t^2 - \frac{1}{432}\, c1^3\, c2\, H^3\, t^3 + \frac{1}{144}\, c1\, c2^2\, H^3\, t^3 + \frac{1}{432}\, c1^2\, c3\, H^3\, t^3 -$$
$$\frac{1}{432}\, c1\, c4\, H^3\, t^3 - \frac{1}{432}\, c1^4\, f1\, H^3\, t^3 + \frac{1}{108}\, c1^2\, c2\, f1\, H^3\, t^3 + \frac{1}{144}\, c2^2\, f1\, H^3\, t^3 +$$
$$\frac{1}{432}\, c1\, c3\, f1\, H^3\, t^3 - \frac{1}{432}\, c4\, f1\, H^3\, t^3 + \frac{5}{144}\, c1\, c2\, f1^2\, H^3\, t^3 + \frac{5}{216}\, c1^2\, f1^3\, H^3\, t^3 +$$
$$\frac{5}{216}\, c2\, f1^3\, H^3\, t^3 + \frac{5}{144}\, c1\, f1^4\, H^3\, t^3 + \frac{1}{72}\, f1^5\, H^3\, t^3 - \frac{1}{24}\, c1\, c2\, f2\, H^3\, t^3 - \frac{1}{24}\, c1^2\, f1\, f2\, H^3\, t^3 -$$
$$\frac{1}{24}\, c2\, f1\, f2\, H^3\, t^3 - \frac{1}{12}\, c1\, f1^2\, f2\, H^3\, t^3 - \frac{1}{24}\, f1^3\, f2\, H^3\, t^3 + \frac{1}{24}\, c1\, f2^2\, H^3\, t^3 + \frac{1}{24}\, f1\, f2^2\, H^3\, t^3 -$$

$$\frac{1}{24} c1\, f1\, f3\, H^3 t^3 - \frac{1}{24} f1^2 f3\, H^3 t^3 + \frac{1}{12} c1\, f4\, H^3 t^3 + \frac{1}{12} f1\, f4\, H^3 t^3 - \frac{1}{864} c1^4 H^4 t^4 + \frac{1}{216} c1^2 c2\, H^4 t^4 + \frac{1}{288} c2^2 H^4 t^4 + \frac{1}{864} c1\, c3\, H^4 t^4 - \frac{1}{864} c4\, H^4 t^4 + \frac{5}{288} c1\, c2\, f1\, H^4 t^4 + \frac{5}{288} c1^2 f1^2 H^4 t^4 + \frac{5}{288} c2\, f1^2 H^4 t^4 + \frac{5}{144} c1\, f1^3 H^4 t^4 + \frac{5}{288} f1^4 H^4 t^4 - \frac{1}{48} c1^2 f2\, H^4 t^4 - \frac{1}{48} c2\, f2\, H^4 t^4 - \frac{1}{16} c1\, f1\, f2\, H^4 t^4 - \frac{1}{24} f1^2 f2\, H^4 t^4 + \frac{1}{48} f2^2 H^4 t^4 - \frac{1}{48} f1\, f3\, H^4 t^4 + \frac{1}{24} f4\, H^4 t^4 + \frac{1}{144} c1\, c2\, H^5 t^5 + \frac{1}{144} c1^2 f1\, H^5 t^5 + \frac{1}{144} c2\, f1\, H^5 t^5 + \frac{1}{48} c1\, f1^2 H^5 t^5 + \frac{1}{72} f1^3 H^5 t^5 - \frac{1}{40} c1\, f2\, H^5 t^5 - \frac{1}{40} f1\, f2\, H^5 t^5 + \frac{1}{432} c1^2 H^6 t^6 + \frac{1}{432} c2\, H^6 t^6 + \frac{1}{144} c1\, f1\, H^6 t^6 + \frac{1}{144} f1^2 H^6 t^6 - \frac{1}{120} f2\, H^6 t^6 + \frac{1}{504} c1\, H^7 t^7 + \frac{1}{504} f1\, H^7 t^7 + \frac{H^8 t^8}{2016}$$

In[113]:=

```
FunctionExpand[1 - Binomial[5 - d, 5]]
```

Out[113]=

$$1 - \frac{1}{120} (1-d)(2-d)(3-d)(4-d)(5-d)$$

In[114]:=

```
Expand[(1 / 4) * l1 * l2 * f1 +
  (1 / 4) * (l1 ^ 2 + l2) * (f1 ^ 2 - 2 * f2) + (1 / 2) * l1 * (f1 ^ 3 - 3 * f1 * f2 + 3 * f3) +
  (1 / 4) * (f1 ^ 4 - 4 * f1 ^ 2 * f2 + 4 * f1 * f3 + 2 * f2 ^ 2) - 36 * d + 36 * %113]
```

Out[114]=

$$\frac{231\, d}{5} - \frac{135\, d^2}{2} + \frac{51\, d^3}{2} - \frac{9\, d^4}{2} + \frac{3\, d^5}{10} + \frac{f1^4}{4} - f1^2 f2 + \frac{f2^2}{2} + f1\, f3 + \frac{f1^3\, l1}{2} - \frac{3\, f1\, f2\, l1}{2} + \frac{3\, f3\, l1}{2} + \frac{f1^2\, l1^2}{4} - \frac{f2\, l1^2}{2} + \frac{f1^2\, l2}{4} - \frac{f2\, l2}{2} + \frac{f1\, l1\, l2}{4}$$

In[115]:=

```
Expand[%114 /. {l1 → (6 - d) * H, l2 → (d ^ 2 - 6 * d + 15) * H ^ 2, f1 → 3 * (d - 1) * H,
   f2 → (1 / 4) * (d - 1) * (16 * d - 14) * H ^ 2, f3 → (1 / 2) * (d - 1) ^ 2 * (6 * d - 4) * H ^ 3}]
```

Out[115]=

$$\frac{231\, d}{5} - \frac{135\, d^2}{2} + \frac{51\, d^3}{2} - \frac{9\, d^4}{2} + \frac{3\, d^5}{10} - \frac{365\, H^4}{8} + \frac{129\, d\, H^4}{2} - \frac{159\, d^2 H^4}{8} + d^4 H^4$$

In[116]:=

```
Expand[%115 /. {H ^ 4 → d}]
```

Out[116]=

$$\frac{23\, d}{40} - 3\, d^2 + \frac{45\, d^3}{8} - \frac{9\, d^4}{2} + \frac{13\, d^5}{10}$$

In[117]:=

```
Expand[(1 / d) * %116]
```

Out[117]=

$$\frac{23}{40} - 3\, d + \frac{45\, d^2}{8} - \frac{9\, d^3}{2} + \frac{13\, d^4}{10}$$

In[118]:=

```
Factor[%117]
```

Out[118]=

$$\frac{1}{40}(-1+d)(-1+2d)\left(23-51d+26d^2\right)$$

In[119]:=

```
FunctionExpand[1 - Binomial[6 - d, 6]]
```

Out[119]=

$$1-\frac{1}{720}(-6+d)(-5+d)(-4+d)(-3+d)(-2+d)(-1+d)$$

In[120]:=

```
Expand[24 * 6 * (H^5 - %119) - (1 / 5) * (f1^5) + (f1^3) * (f2) - (f1^2) * (f3) -
  (f1) * (f2^2) + (f1) * (f4) + (f2) * (f3) + (1 / 2) * (f1^2 - 2 * f2) * l2 * (d - 7) * H +
  (1 / 30) * f1 * ((d - 7)^4 * H^4 - 4 * (d - 7)^2 * H^2 * l2 + (d - 7) * H * l3 - 3 * l2^2 + l4) +
  (1 / 2) * (f1^4 - 4 * f1^2 * f2 + 4 * f1 * f3 + 2 * f2^2 - 4 * f4) * (d - 7) * H -
  (1 / 3) * ((d - 7)^2 * H^2 + l2) * (f1^3 - 3 * f1 * f2 + 3 * f3)]
```

Out[120]=

$$-\frac{1764\,d}{5}+\frac{1624\,d^2}{5}-147\,d^3+35\,d^4-\frac{21\,d^5}{5}+\frac{d^6}{5}-\frac{f1^5}{5}+f1^3\,f2-f1\,f2^2-f1^2\,f3+$$
$$f2\,f3+f1\,f4-\frac{7\,f1^4\,H}{2}+\frac{1}{2}d\,f1^4\,H+14\,f1^2\,f2\,H-2\,d\,f1^2\,f2\,H-7\,f2^2\,H+d\,f2^2\,H-$$
$$14\,f1\,f3\,H+2\,d\,f1\,f3\,H+14\,f4\,H-2\,d\,f4\,H-\frac{49\,f1^3\,H^2}{3}+\frac{14}{3}d\,f1^3\,H^2-\frac{1}{3}d^2\,f1^3\,H^2+$$
$$49\,f1\,f2\,H^2-14\,d\,f1\,f2\,H^2+d^2\,f1\,f2\,H^2-49\,f3\,H^2+14\,d\,f3\,H^2-d^2\,f3\,H^2+$$
$$\frac{2401\,f1\,H^4}{30}-\frac{686}{15}d\,f1\,H^4+\frac{49}{5}d^2\,f1\,H^4-\frac{14}{15}d^3\,f1\,H^4+\frac{1}{30}d^4\,f1\,H^4+144\,H^5-\frac{f1^3\,l2}{3}+$$
$$f1\,f2\,l2-f3\,l2-\frac{7}{2}f1^2\,H\,l2+\frac{1}{2}d\,f1^2\,H\,l2+7\,f2\,H\,l2-d\,f2\,H\,l2-\frac{98}{15}f1\,H^2\,l2+$$
$$\frac{28}{15}d\,f1\,H^2\,l2-\frac{2}{15}d^2\,f1\,H^2\,l2-\frac{f1\,l2^2}{10}-\frac{7\,f1\,H\,l3}{30}+\frac{1}{30}d\,f1\,H\,l3+\frac{f1\,l4}{30}$$

In[121]:=

```
Expand[%120 /. {l2 → (d^2 - 7 * d + 21) * H^2, l3 → (35 - 21 * d + 7 * d^2 - d^3) * H^3,
   l4 → (d^4 - 7 * d^3 + 21 * d^2 - 35 * d + 35) * H^4,
   f1 → 3 * (d - 1) * H, f2 → (1 / 4) * (d - 1) * (16 * d - 14) * H^2,
   f3 → (1 / 2) * (d - 1)^2 * (6 * d - 4) * H^3, f4 → %118 * H^4}]
```

Out[121]=

$$-\frac{1764\,d}{5}+\frac{1624\,d^2}{5}-147\,d^3+35\,d^4-\frac{21\,d^5}{5}+\frac{d^6}{5}+$$
$$\frac{14\,109\,H^5}{40}-\frac{12\,969\,d\,H^5}{40}+\frac{1163\,d^2\,H^5}{8}-\frac{263\,d^3\,H^5}{8}+\frac{29\,d^4\,H^5}{10}+\frac{d^5\,H^5}{10}$$

In[122]:=

```
Expand[%121 /. {H^5 → d}]
```

Out[122]=

$$-\frac{3\,d}{40}+\frac{23\,d^2}{40}-\frac{13\,d^3}{8}+\frac{17\,d^4}{8}-\frac{13\,d^5}{10}+\frac{3\,d^6}{10}$$

In[123]:=

```
Expand[(1 / d) * %122]
```

Out[123]=

$$-\frac{3}{40}+\frac{23\,d}{40}-\frac{13\,d^2}{8}+\frac{17\,d^3}{8}-\frac{13\,d^4}{10}+\frac{3\,d^5}{10}$$

In[124]:=

```
Factor[%123]
```

Out[124]=

$$\frac{1}{40}\,(-1+d)^2\,(-3+2\,d)\,(-1+2\,d)\,(-1+3\,d)$$

In[125]:=

```
FunctionExpand[1 - Binomial[7 - d, 7]]
```

Out[125]=

$$1+\frac{(-7+d)\,(-6+d)\,(-5+d)\,(-4+d)\,(-3+d)\,(-2+d)\,(-1+d)}{5040}$$

In[126]:=

```
Expand[120 * 6 * (%125 - H ^ 6) -
  (f1 / 12) * (l1 ^ 3 * l2 - 3 * l1 * l2 ^ 2 - l1 ^ 2 * l3 + l1 * l4) - (1 / 12) *
   (l1 ^ 4 * f1 ^ 2 - 4 * l1 ^ 2 * l2 * f1 ^ 2 - 3 * l2 ^ 2 * f1 ^ 2 - l1 * l3 * f1 ^ 2 + l4 * f1 ^ 2 -
     2 * l1 ^ 4 * f2 + 8 * l1 ^ 2 * l2 * f2 + 6 * l2 ^ 2 * f2 + 2 * l1 * l3 * f2 - 2 * l4 * f2) +
  (5 / 6) * l1 * l2 * (f1 ^ 3 - 3 * f1 * f2 + 3 * f3) + (5 / 12) * (l1 ^ 2 + l2) *
   (f1 ^ 4 - 4 * f1 ^ 2 * f2 + 2 * f2 ^ 2 + 4 * f1 * f3 - 4 * f4) + (l1 / 2) *
   (f1 ^ 5 - 5 * f1 ^ 3 * f2 + 5 * f1 * f2 ^ 2 + 5 * f1 ^ 2 * f3 - 5 * f2 * f3 - 5 * f1 * f4 + 5 * f5) +
  (1 / 6) * (f1 ^ 6 - 6 * f1 ^ 4 * f2 + 9 * f1 ^ 2 * f2 ^ 2 - 2 * f2 ^ 3 + 6 * f1 ^ 3 * f3 -
     12 * f1 * f2 * f3 + 3 * f3 ^ 2 - 6 * f1 ^ 2 * f4 + 6 * f2 * f4 + 6 * f1 * f5)]
```

Out[126]=

$$\frac{13\,068\,d}{7}-1876\,d^2+967\,d^3-280\,d^4+46\,d^5-4\,d^6+\frac{d^7}{7}+\frac{f1^6}{6}-f1^4\,f2+\frac{3\,f1^2\,f2^2}{2}-\frac{f2^3}{3}+$$
$$f1^3\,f3-2\,f1\,f2\,f3+\frac{f3^2}{2}-f1^2\,f4+f2\,f4+f1\,f5-720\,H^6+\frac{f1^5\,l1}{2}-\frac{5}{2}\,f1^3\,f2\,l1+$$
$$\frac{5}{2}\,f1\,f2^2\,l1+\frac{5}{2}\,f1^2\,f3\,l1-\frac{5\,f2\,f3\,l1}{2}-\frac{5\,f1\,f4\,l1}{2}+\frac{5\,f5\,l1}{2}+\frac{5\,f1^4\,l1^2}{12}-$$
$$\frac{5}{3}\,f1^2\,f2\,l1^2+\frac{5\,f2^2\,l1^2}{6}+\frac{5}{3}\,f1\,f3\,l1^2-\frac{5\,f4\,l1^2}{3}-\frac{f1^2\,l1^4}{12}+\frac{f2\,l1^4}{6}+\frac{5\,f1^4\,l2}{12}-$$
$$\frac{5}{3}\,f1^2\,f2\,l2+\frac{5\,f2^2\,l2}{6}+\frac{5\,f1\,f3\,l2}{3}-\frac{5\,f4\,l2}{3}+\frac{5}{6}\,f1^3\,l1\,l2-\frac{5}{2}\,f1\,f2\,l1\,l2+$$
$$\frac{5\,f3\,l1\,l2}{2}+\frac{1}{3}\,f1^2\,l1^2\,l2-\frac{2}{3}\,f2\,l1^2\,l2-\frac{1}{12}\,f1\,l1^3\,l2+\frac{f1^2\,l2^2}{4}-\frac{f2\,l2^2}{2}+$$
$$\frac{1}{4}\,f1\,l1\,l2^2+\frac{1}{12}\,f1^2\,l1\,l3-\frac{f2\,l1\,l3}{6}+\frac{1}{12}\,f1\,l1^2\,l3-\frac{f1^2\,l4}{12}+\frac{f2\,l4}{6}-\frac{f1\,l1\,l4}{12}$$

In[127]:=

```
Expand[%126 /.
  {l1 → (8 - d) * H, l2 → (d ^ 2 - 8 * d + 28) * H ^ 2, l3 → (56 - 28 * d + 8 * d ^ 2 - d ^ 3) * H ^ 3,
   l4 → (d ^ 4 - 8 * d ^ 3 + 28 * d ^ 2 - 56 * d + 70) * H ^ 4,
   l5 → (56 - 70 * d + 56 * d ^ 2 - 28 * d ^ 3 + 8 * d ^ 4 - d ^ 5) * H ^ 5,
   f1 → 3 * (d - 1) * H, f2 → (1 / 4) * (d - 1) * (16 * d - 14) * H ^ 2,
   f3 → (1 / 2) * (d - 1) ^ 2 * (6 * d - 4) * H ^ 3, f4 → %118 * H ^ 4, f5 → %124 * H ^ 5}]
```

Out[127]=

$$\frac{13\,068\,d}{7} - 1876\,d^2 + 967\,d^3 - 280\,d^4 + 46\,d^5 - 4\,d^6 + \frac{d^7}{7} - \frac{89\,609\,H^6}{48} + \frac{150\,077\,d\,H^6}{80} - \frac{77\,347\,d^2\,H^6}{80} + \frac{4475\,d^3\,H^6}{16} - \frac{1097\,d^4\,H^6}{24} + \frac{77\,d^5\,H^6}{20} - \frac{d^6\,H^6}{10}$$

In[128]:=

```
Expand[%127 /. {H ^ 6 → d}]
```

Out[128]=

$$\frac{d}{336} - \frac{3\,d^2}{80} + \frac{13\,d^3}{80} - \frac{5\,d^4}{16} + \frac{7\,d^5}{24} - \frac{3\,d^6}{20} + \frac{3\,d^7}{70}$$

In[129]:=

```
Expand[(1 / d) * %128]
```

Out[129]=

$$\frac{1}{336} - \frac{3\,d}{80} + \frac{13\,d^2}{80} - \frac{5\,d^3}{16} + \frac{7\,d^4}{24} - \frac{3\,d^5}{20} + \frac{3\,d^6}{70}$$

In[130]:=

```
Factor[%129]
```

Out[130]=

$$\frac{(-1+d)\,(-1+2\,d)\,(-1+3\,d)\,(-1+6\,d)\,\left(5-3\,d+2\,d^2\right)}{1680}$$

In[131]:=

```
Expand[p1 /. {c1 → (10 - d) * H,
   c2 → (d ^ 2 - 10 * d + 45) * H ^ 2, c3 → (120 - 45 * d + 10 * d ^ 2 - d ^ 3) * H ^ 3,
   c4 → (d ^ 4 - 10 * d ^ 3 + 45 * d ^ 2 - 120 * d + 210) * H ^ 4,
   c5 → (252 - 210 * d + 120 * d ^ 2 - 45 * d ^ 3 + 10 * d ^ 4 - d ^ 5) * H ^ 5,
   c6 → (d ^ 6 - 10 * d ^ 5 + 45 * d ^ 4 - 120 * d ^ 3 + 210 * d ^ 2 - 252 * d + 210) * H ^ 6,
   c7 → (120 - 210 * d + 252 * d ^ 2 - 210 * d ^ 3 + 120 * d ^ 4 - 45 * d ^ 5 + 10 * d ^ 6 - d ^ 7) * H ^ 7,
   c8 → (45 - 120 * d + 210 * d ^ 2 - 252 * d ^ 3 + 210 * d ^ 4 -
       120 * d ^ 5 + 45 * d ^ 6 - 10 * d ^ 7 + d ^ 8) * H ^ 8, f1 → 3 * (d - 1) * H,
   f2 → (1 / 4) * (d - 1) * (16 * d - 14) * H ^ 2, f3 → (1 / 2) * (d - 1) ^ 2 * (6 * d - 4) * H ^ 3,
   f4 → %118 * H ^ 4, f5 → %124 * H ^ 5, f6 → %130 * H ^ 6}]
```

Out[131]=

$$\frac{644\,798\,341\,H^8}{169\,344\,000}+\frac{1923\,d\,H^8}{280}+\frac{13\,172\,483\,d^2\,H^8}{3\,386\,880}+\frac{359\,d^3\,H^8}{480}-\frac{4\,868\,861\,d^4\,H^8}{24\,192\,000}-\frac{29\,d^5\,H^8}{240}+$$
$$\frac{221\,d^6\,H^8}{56\,448}+\frac{17\,d^7\,H^8}{3360}+\frac{1063\,d^8\,H^8}{2\,352\,000}+\frac{1923\,H^8\,t}{140}+\frac{62\,009\,d\,H^8\,t}{3360}+\frac{469}{60}\,d^2\,H^8\,t+\frac{2087\,d^3\,H^8\,t}{1920}-$$
$$\frac{7}{30}\,d^4\,H^8\,t-\frac{31}{320}\,d^5\,H^8\,t+\frac{1}{420}\,d^6\,H^8\,t+\frac{17\,d^7\,H^8\,t}{13\,440}+\frac{62\,009\,H^8\,t^2}{3360}+\frac{1517}{80}\,d\,H^8\,t^2+$$
$$\frac{967}{160}\,d^2\,H^8\,t^2+\frac{29}{48}\,d^3\,H^8\,t^2-\frac{23}{240}\,d^4\,H^8\,t^2-\frac{1}{40}\,d^5\,H^8\,t^2+\frac{d^6\,H^8\,t^2}{3360}+\frac{1517\,H^8\,t^3}{120}+$$
$$\frac{9517}{960}\,d\,H^8\,t^3+\frac{7}{3}\,d^2\,H^8\,t^3+\frac{31}{192}\,d^3\,H^8\,t^3-\frac{1}{60}\,d^4\,H^8\,t^3-\frac{1}{480}\,d^5\,H^8\,t^3+\frac{9517\,H^8\,t^4}{1920}+$$
$$\frac{139}{48}\,d\,H^8\,t^4+\frac{23}{48}\,d^2\,H^8\,t^4+\frac{1}{48}\,d^3\,H^8\,t^4-\frac{1}{960}\,d^4\,H^8\,t^4+\frac{139\,H^8\,t^5}{120}+\frac{153}{320}\,d\,H^8\,t^5+$$
$$\frac{1}{20}\,d^2\,H^8\,t^5+\frac{1}{960}\,d^3\,H^8\,t^5+\frac{51\,H^8\,t^6}{320}+\frac{1}{24}\,d\,H^8\,t^6+\frac{1}{480}\,d^2\,H^8\,t^6+\frac{H^8\,t^7}{84}+\frac{1}{672}\,d\,H^8\,t^7+\frac{H^8\,t^8}{2688}$$

In[132]:=

```
Expand[%131 /. {H ^ 8 → d}]
```

Out[132]=

$$\frac{644\,798\,341\,d}{169\,344\,000}+\frac{1923\,d^2}{280}+\frac{13\,172\,483\,d^3}{3\,386\,880}+\frac{359\,d^4}{480}-\frac{4\,868\,861\,d^5}{24\,192\,000}-\frac{29\,d^6}{240}+$$
$$\frac{221\,d^7}{56\,448}+\frac{17\,d^8}{3360}+\frac{1063\,d^9}{2\,352\,000}+\frac{1923\,d\,t}{140}+\frac{62\,009\,d^2\,t}{3360}+\frac{469\,d^3\,t}{60}+\frac{2087\,d^4\,t}{1920}-$$
$$\frac{7\,d^5\,t}{30}-\frac{31\,d^6\,t}{320}+\frac{d^7\,t}{420}+\frac{17\,d^8\,t}{13\,440}+\frac{62\,009\,d\,t^2}{3360}+\frac{1517\,d^2\,t^2}{80}+\frac{967\,d^3\,t^2}{160}+$$
$$\frac{29\,d^4\,t^2}{48}-\frac{23\,d^5\,t^2}{240}-\frac{d^6\,t^2}{40}+\frac{d^7\,t^2}{3360}+\frac{1517\,d\,t^3}{120}+\frac{9517\,d^2\,t^3}{960}+\frac{7\,d^3\,t^3}{3}+\frac{31\,d^4\,t^3}{192}-$$
$$\frac{d^5\,t^3}{60}-\frac{d^6\,t^3}{480}+\frac{9517\,d\,t^4}{1920}+\frac{139\,d^2\,t^4}{48}+\frac{23\,d^3\,t^4}{48}+\frac{d^4\,t^4}{48}-\frac{d^5\,t^4}{960}+\frac{139\,d\,t^5}{120}+$$
$$\frac{153\,d^2\,t^5}{320}+\frac{d^3\,t^5}{20}+\frac{d^4\,t^5}{960}+\frac{51\,d\,t^6}{320}+\frac{d^2\,t^6}{24}+\frac{d^3\,t^6}{480}+\frac{d\,t^7}{84}+\frac{d^2\,t^7}{672}+\frac{d\,t^8}{2688}$$

In[133]:=

```
Expand[p2 /. {c1 → (10 - d) * H,
   c2 → (d ^ 2 - 10 * d + 45) * H ^ 2, c3 → (120 - 45 * d + 10 * d ^ 2 - d ^ 3) * H ^ 3,
   c4 → (d ^ 4 - 10 * d ^ 3 + 45 * d ^ 2 - 120 * d + 210) * H ^ 4,
   c5 → (252 - 210 * d + 120 * d ^ 2 - 45 * d ^ 3 + 10 * d ^ 4 - d ^ 5) * H ^ 5,
   c6 → (d ^ 6 - 10 * d ^ 5 + 45 * d ^ 4 - 120 * d ^ 3 + 210 * d ^ 2 - 252 * d + 210) * H ^ 6,
   c7 → (120 - 210 * d + 252 * d ^ 2 - 210 * d ^ 3 + 120 * d ^ 4 - 45 * d ^ 5 + 10 * d ^ 6 - d ^ 7) * H ^ 7,
   c8 → (45 - 120 * d + 210 * d ^ 2 - 252 * d ^ 3 + 210 * d ^ 4 -
       120 * d ^ 5 + 45 * d ^ 6 - 10 * d ^ 7 + d ^ 8) * H ^ 8, f1 → 3 * (d - 1) * H,
   f2 → (1 / 4) * (d - 1) * (16 * d - 14) * H ^ 2, f3 → (1 / 2) * (d - 1) ^ 2 * (6 * d - 4) * H ^ 3,
   f4 → %118 * H ^ 4, f5 → %124 * H ^ 5, f6 → %130 * H ^ 6}]
```

Out[133]=

$$\frac{25\,678\,561\,H^8}{56\,448\,000}+\frac{1841\,d\,H^8}{480}+\frac{15\,262\,043\,d^2\,H^8}{2\,032\,128}+\frac{4333\,d^3\,H^8}{720}+\frac{52\,614\,157\,d^4\,H^8}{24\,192\,000}+$$
$$\frac{287\,d^5\,H^8}{1440}-\frac{113\,639\,d^6\,H^8}{846\,720}-\frac{19\,d^7\,H^8}{360}-\frac{188\,231\,d^8\,H^8}{31\,752\,000}+\frac{1841\,H^8\,t}{480}+\frac{16\,937\,d\,H^8\,t}{1080}+$$
$$\frac{14\,651}{720}\,d^2\,H^8\,t+\frac{24\,931\,d^3\,H^8\,t}{2160}+\frac{1393}{480}\,d^4\,H^8\,t+\frac{319\,d^5\,H^8\,t}{2160}-\frac{31}{360}\,d^6\,H^8\,t-$$
$$\frac{19\,d^7\,H^8\,t}{1260}+\frac{16\,937\,H^8\,t^2}{2160}+\frac{5159}{240}\,d\,H^8\,t^2+\frac{17\,143}{864}\,d^2\,H^8\,t^2+\frac{385}{48}\,d^3\,H^8\,t^2+$$
$$\frac{1969\,d^4\,H^8\,t^2}{1440}+\frac{7}{180}\,d^5\,H^8\,t^2-\frac{31\,d^6\,H^8\,t^2}{2520}+\frac{5159\,H^8\,t^3}{720}+\frac{3799}{270}\,d\,H^8\,t^3+$$
$$\frac{1337}{144}\,d^2\,H^8\,t^3+\frac{557}{216}\,d^3\,H^8\,t^3+\frac{49}{180}\,d^4\,H^8\,t^3+\frac{1}{270}\,d^5\,H^8\,t^3+\frac{3799\,H^8\,t^4}{1080}+\frac{119}{24}\,d\,H^8\,t^4+$$
$$\frac{1945}{864}\,d^2\,H^8\,t^4+\frac{7}{18}\,d^3\,H^8\,t^4+\frac{7}{360}\,d^4\,H^8\,t^4+\frac{119\,H^8\,t^5}{120}+\frac{347}{360}\,d\,H^8\,t^5+\frac{49}{180}\,d^2\,H^8\,t^5+$$
$$\frac{1}{45}\,d^3\,H^8\,t^5+\frac{347\,H^8\,t^6}{2160}+\frac{7}{72}\,d\,H^8\,t^6+\frac{7}{540}\,d^2\,H^8\,t^6+\frac{H^8\,t^7}{72}+\frac{1}{252}\,d\,H^8\,t^7+\frac{H^8\,t^8}{2016}$$

In[134]:=

```
Expand[%133 /. {H ^ 8 → d}]
```

Out[134]=

$$\frac{25\,678\,561\,d}{56\,448\,000}+\frac{1841\,d^2}{480}+\frac{15\,262\,043\,d^3}{2\,032\,128}+\frac{4333\,d^4}{720}+\frac{52\,614\,157\,d^5}{24\,192\,000}+\frac{287\,d^6}{1440}-\frac{113\,639\,d^7}{846\,720}-$$
$$\frac{19\,d^8}{360}-\frac{188\,231\,d^9}{31\,752\,000}+\frac{1841\,d\,t}{480}+\frac{16\,937\,d^2\,t}{1080}+\frac{14\,651\,d^3\,t}{720}+\frac{24\,931\,d^4\,t}{2160}+\frac{1393\,d^5\,t}{480}+$$
$$\frac{319\,d^6\,t}{2160}-\frac{31\,d^7\,t}{360}-\frac{19\,d^8\,t}{1260}+\frac{16\,937\,d\,t^2}{2160}+\frac{5159\,d^2\,t^2}{240}+\frac{17\,143\,d^3\,t^2}{864}+\frac{385\,d^4\,t^2}{48}+$$
$$\frac{1969\,d^5\,t^2}{1440}+\frac{7\,d^6\,t^2}{180}-\frac{31\,d^7\,t^2}{2520}+\frac{5159\,d\,t^3}{720}+\frac{3799\,d^2\,t^3}{270}+\frac{1337\,d^3\,t^3}{144}+\frac{557\,d^4\,t^3}{216}+$$
$$\frac{49\,d^5\,t^3}{180}+\frac{d^6\,t^3}{270}+\frac{3799\,d\,t^4}{1080}+\frac{119\,d^2\,t^4}{24}+\frac{1945\,d^3\,t^4}{864}+\frac{7\,d^4\,t^4}{18}+\frac{7\,d^5\,t^4}{360}+\frac{119\,d\,t^5}{120}+$$
$$\frac{347\,d^2\,t^5}{360}+\frac{49\,d^3\,t^5}{180}+\frac{d^4\,t^5}{45}+\frac{347\,d\,t^6}{2160}+\frac{7\,d^2\,t^6}{72}+\frac{7\,d^3\,t^6}{540}+\frac{d\,t^7}{72}+\frac{d^2\,t^7}{252}+\frac{d\,t^8}{2016}$$

In[135]:=

```
Expand[p1 /. {c1 → (10 - d) * H,
   c2 → (d ^ 2 - 10 * d + 45) * H ^ 2, c3 → (120 - 45 * d + 10 * d ^ 2 - d ^ 3) * H ^ 3,
   c4 → (d ^ 4 - 10 * d ^ 3 + 45 * d ^ 2 - 120 * d + 210) * H ^ 4,
   c5 → (252 - 210 * d + 120 * d ^ 2 - 45 * d ^ 3 + 10 * d ^ 4 - d ^ 5) * H ^ 5,
   c6 → (d ^ 6 - 10 * d ^ 5 + 45 * d ^ 4 - 120 * d ^ 3 + 210 * d ^ 2 - 252 * d + 210) * H ^ 6,
   c7 → (120 - 210 * d + 252 * d ^ 2 - 210 * d ^ 3 + 120 * d ^ 4 - 45 * d ^ 5 + 10 * d ^ 6 - d ^ 7) * H ^ 7,
   c8 → (45 - 120 * d + 210 * d ^ 2 - 252 * d ^ 3 + 210 * d ^ 4 -
       120 * d ^ 5 + 45 * d ^ 6 - 10 * d ^ 7 + d ^ 8) * H ^ 8, f1 → -3 * (d - 1) * H,
   f2 → (1 / 4) * (d - 1) * (16 * d - 14) * H ^ 2, f3 → - (1 / 2) * (d - 1) ^ 2 * (6 * d - 4) * H ^ 3,
   f4 → %118 * H ^ 4, f5 → %124 * (-1) * H ^ 5, f6 → %130 * H ^ 6}]
```

Out[135]=

$$\frac{56\,633\,150\,341\,H^8}{169\,344\,000} - \frac{442\,557\,d\,H^8}{560} + \frac{2\,633\,184\,227\,d^2\,H^8}{3\,386\,880} - \frac{132\,921\,d^3\,H^8}{320} + \frac{3\,159\,268\,339\,d^4\,H^8}{24\,192\,000} -$$
$$\frac{3873\,d^5\,H^8}{160} + \frac{708\,973\,d^6\,H^8}{282\,240} - \frac{303\,d^7\,H^8}{2240} + \frac{9113\,d^8\,H^8}{2\,352\,000} + \frac{147\,519\,H^8\,t}{280} - \frac{1\,185\,579\,d\,H^8\,t}{1120} +$$
$$\frac{1737}{2}\,d^2\,H^8\,t - \frac{48\,231}{128}\,d^3\,H^8\,t + \frac{3701}{40}\,d^4\,H^8\,t - \frac{4027}{320}\,d^5\,H^8\,t + \frac{239}{280}\,d^6\,H^8\,t -$$
$$\frac{101\,d^7\,H^8\,t}{4480} + \frac{395\,193\,H^8\,t^2}{1120} - \frac{94\,653}{160}\,d\,H^8\,t^2 + \frac{15\,771}{40}\,d^2\,H^8\,t^2 - \frac{4275}{32}\,d^3\,H^8\,t^2 +$$
$$\frac{11\,549}{480}\,d^4\,H^8\,t^2 - \frac{171}{80}\,d^5\,H^8\,t^2 + \frac{239\,d^6\,H^8\,t^2}{3360} + \frac{10\,517\,H^8\,t^3}{80} - \frac{57\,317}{320}\,d\,H^8\,t^3 +$$
$$\frac{373}{4}\,d^2\,H^8\,t^3 - \frac{1483}{64}\,d^3\,H^8\,t^3 + \frac{109}{40}\,d^4\,H^8\,t^3 - \frac{19}{160}\,d^5\,H^8\,t^3 + \frac{57\,317\,H^8\,t^4}{1920} - \frac{1017}{32}\,d\,H^8\,t^4 +$$
$$\frac{1165}{96}\,d^2\,H^8\,t^4 - \frac{63}{32}\,d^3\,H^8\,t^4 + \frac{109}{960}\,d^4\,H^8\,t^4 + \frac{339\,H^8\,t^5}{80} - \frac{1059}{320}\,d\,H^8\,t^5 + \frac{33}{40}\,d^2\,H^8\,t^5 -$$
$$\frac{21}{320}\,d^3\,H^8\,t^5 + \frac{353\,H^8\,t^6}{960} - \frac{3}{16}\,d\,H^8\,t^6 + \frac{11}{480}\,d^2\,H^8\,t^6 + \frac{H^8\,t^7}{56} - \frac{1}{224}\,d\,H^8\,t^7 + \frac{H^8\,t^8}{2688}$$

In[136]:=

```
Expand[%135 /. {t → t + 3 * (d - 1)}]
```

Out[136]=

$$-\frac{28\,520\,459\,H^8}{169\,344\,000}-\frac{27\,d\,H^8}{112}+\frac{6\,404\,771\,d^2\,H^8}{3\,386\,880}+\frac{3321\,d^3\,H^8}{640}+\frac{125\,364\,739\,d^4\,H^8}{24\,192\,000}+\frac{159\,d^5\,H^8}{64}+$$
$$\frac{166\,921\,d^6\,H^8}{282\,240}+\frac{303\,d^7\,H^8}{4480}+\frac{9113\,d^8\,H^8}{2\,352\,000}-\frac{9\,H^8\,t}{56}+\frac{2817\,d\,H^8\,t}{1120}+\frac{171}{16}\,d^2\,H^8\,t+\frac{1899}{128}\,d^3\,H^8\,t+$$
$$\frac{379}{40}\,d^4\,H^8\,t+\frac{949}{320}\,d^5\,H^8\,t+\frac{239}{560}\,d^6\,H^8\,t+\frac{101\,d^7\,H^8\,t}{4480}+\frac{939\,H^8\,t^2}{1120}+\frac{2313}{320}\,d\,H^8\,t^2+$$
$$\frac{2469}{160}\,d^2\,H^8\,t^2+\frac{873}{64}\,d^3\,H^8\,t^2+\frac{17}{3}\,d^4\,H^8\,t^2+\frac{171}{160}\,d^5\,H^8\,t^2+\frac{239\,d^6\,H^8\,t^2}{3360}+\frac{257\,H^8\,t^3}{160}+$$
$$\frac{2237}{320}\,d\,H^8\,t^3+\frac{19}{2}\,d^2\,H^8\,t^3+\frac{349}{64}\,d^3\,H^8\,t^3+\frac{109}{80}\,d^4\,H^8\,t^3+\frac{19}{160}\,d^5\,H^8\,t^3+\frac{2237\,H^8\,t^4}{1920}+$$
$$\frac{207}{64}\,d\,H^8\,t^4+\frac{137}{48}\,d^2\,H^8\,t^4+\frac{63}{64}\,d^3\,H^8\,t^4+\frac{109}{960}\,d^4\,H^8\,t^4+\frac{69\,H^8\,t^5}{160}+\frac{249}{320}\,d\,H^8\,t^5+$$
$$\frac{33}{80}\,d^2\,H^8\,t^5+\frac{21}{320}\,d^3\,H^8\,t^5+\frac{83\,H^8\,t^6}{960}+\frac{3}{32}\,d\,H^8\,t^6+\frac{11}{480}\,d^2\,H^8\,t^6+\frac{H^8\,t^7}{112}+\frac{1}{224}\,d\,H^8\,t^7+\frac{H^8\,t^8}{2688}$$

In[137]:=

```
Expand[%136 /. {H^8 → d}]
```

Out[137]=

$$-\frac{28\,520\,459\,d}{169\,344\,000}-\frac{27\,d^2}{112}+\frac{6\,404\,771\,d^3}{3\,386\,880}+\frac{3321\,d^4}{640}+\frac{125\,364\,739\,d^5}{24\,192\,000}+\frac{159\,d^6}{64}+\frac{166\,921\,d^7}{282\,240}+$$
$$\frac{303\,d^8}{4480}+\frac{9113\,d^9}{2\,352\,000}-\frac{9\,d\,t}{56}+\frac{2817\,d^2\,t}{1120}+\frac{171\,d^3\,t}{16}+\frac{1899\,d^4\,t}{128}+\frac{379\,d^5\,t}{40}+\frac{949\,d^6\,t}{320}+$$
$$\frac{239\,d^7\,t}{560}+\frac{101\,d^8\,t}{4480}+\frac{939\,d\,t^2}{1120}+\frac{2313\,d^2\,t^2}{320}+\frac{2469\,d^3\,t^2}{160}+\frac{873\,d^4\,t^2}{64}+\frac{17\,d^5\,t^2}{3}+$$
$$\frac{171\,d^6\,t^2}{160}+\frac{239\,d^7\,t^2}{3360}+\frac{257\,d\,t^3}{160}+\frac{2237\,d^2\,t^3}{320}+\frac{19\,d^3\,t^3}{2}+\frac{349\,d^4\,t^3}{64}+\frac{109\,d^5\,t^3}{80}+$$
$$\frac{19\,d^6\,t^3}{160}+\frac{2237\,d\,t^4}{1920}+\frac{207\,d^2\,t^4}{64}+\frac{137\,d^3\,t^4}{48}+\frac{63\,d^4\,t^4}{64}+\frac{109\,d^5\,t^4}{960}+\frac{69\,d\,t^5}{160}+$$
$$\frac{249\,d^2\,t^5}{320}+\frac{33\,d^3\,t^5}{80}+\frac{21\,d^4\,t^5}{320}+\frac{83\,d\,t^6}{960}+\frac{3\,d^2\,t^6}{32}+\frac{11\,d^3\,t^6}{480}+\frac{d\,t^7}{112}+\frac{d^2\,t^7}{224}+\frac{d\,t^8}{2688}$$

In[138]:=

```
Expand[%132 /. {t → m - 3 * (d - 1)}]
```

Out[138]=

$$\frac{233\,706\,519\,541\,d}{169\,344\,000}-\frac{70\,795\,d^2}{16}+\frac{4\,094\,734\,279\,d^3}{677\,376}-\frac{1\,765\,421\,d^4}{384}+\frac{51\,471\,019\,939\,d^5}{24\,192\,000}-\frac{117\,607\,d^6}{192}+\frac{30\,173\,569\,d^7}{282\,240}-\frac{3965\,d^8}{384}+\frac{995\,413\,d^9}{2\,352\,000}+\frac{14\,159\,d\,m}{8}-\frac{3\,274\,757\,d^2\,m}{672}+\frac{1\,345\,099\,d^3\,m}{240}-\frac{1\,340\,591\,d^4\,m}{384}+\frac{76\,279\,d^5\,m}{60}-\frac{17\,295\,d^6\,m}{64}+\frac{1487\,d^7\,m}{48}-\frac{3965\,d^8\,m}{2688}+\frac{3\,274\,757\,d\,m^2}{3360}-\frac{144\,599\,d^2\,m^2}{64}+\frac{340\,543\,d^3\,m^2}{160}-\frac{200\,305\,d^4\,m^2}{192}+\frac{13\,463\,d^5\,m^2}{48}-\frac{1253\,d^6\,m^2}{32}+\frac{1487\,d^7\,m^2}{672}+\frac{144\,599\,d\,m^3}{480}-\frac{109\,837\,d^2\,m^3}{192}+\frac{5089\,d^3\,m^3}{12}-\frac{29\,465\,d^4\,m^3}{192}+\frac{6503\,d^5\,m^3}{240}-\frac{179\,d^6\,m^3}{96}+\frac{109\,837\,d\,m^4}{1920}-\frac{16\,415\,d^2\,m^4}{192}+\frac{1123\,d^3\,m^4}{24}-\frac{2135\,d^4\,m^4}{192}+\frac{929\,d^5\,m^4}{960}+\frac{3283\,d\,m^5}{480}-\frac{483\,d^2\,m^5}{64}+\frac{217\,d^3\,m^5}{80}-\frac{61\,d^4\,m^5}{192}+\frac{161\,d\,m^6}{320}-\frac{35\,d^2\,m^6}{96}+\frac{31\,d^3\,m^6}{480}+\frac{d\,m^7}{48}-\frac{5\,d^2\,m^7}{672}+\frac{d\,m^8}{2688}$$

In[139]:=

```
Expand[%134 /. {t → m - 3 * (d - 1)}]
```

Out[139]=

$$\frac{53\,774\,422\,561\,d}{56\,448\,000}-\frac{13\,503\,659\,d^2}{5040}+\frac{32\,254\,026\,919\,d^3}{10\,160\,640}-\frac{37\,219\,d^4}{18}+\frac{19\,515\,901\,357\,d^5}{24\,192\,000}-\frac{137\,683\,d^6}{720}+\frac{22\,197\,769\,d^7}{846\,720}-\frac{221\,d^8}{126}+\frac{936\,319\,d^9}{31\,752\,000}+\frac{13\,503\,659\,d\,m}{10\,080}-\frac{1\,741\,427\,d^2\,m}{540}+\frac{577\,057\,d^3\,m}{180}-\frac{1\,841\,407\,d^4\,m}{1080}+\frac{83\,499\,d^5\,m}{160}-\frac{98\,359\,d^6\,m}{1080}+\frac{10\,309\,d^7\,m}{1260}-\frac{17\,d^8\,m}{63}+\frac{1\,741\,427\,d\,m^2}{2160}-\frac{195\,481\,d^2\,m^2}{120}+\frac{5\,713\,343\,d^3\,m^2}{4320}-\frac{13\,247\,d^4\,m^2}{24}+\frac{179\,149\,d^5\,m^2}{1440}-\frac{2561\,d^6\,m^2}{180}+\frac{793\,d^7\,m^2}{1260}+\frac{195\,481\,d\,m^3}{720}-\frac{60\,499\,d^2\,m^3}{135}+\frac{41\,119\,d^3\,m^3}{144}-\frac{9479\,d^4\,m^3}{108}+\frac{4667\,d^5\,m^3}{360}-\frac{197\,d^6\,m^3}{270}+\frac{60\,499\,d\,m^4}{1080}-\frac{871\,d^2\,m^4}{12}+\frac{29\,431\,d^3\,m^4}{864}-\frac{247\,d^4\,m^4}{36}+\frac{359\,d^5\,m^4}{720}+\frac{871\,d\,m^5}{120}-\frac{1247\,d^2\,m^5}{180}+\frac{767\,d^3\,m^5}{360}-\frac{19\,d^4\,m^5}{90}+\frac{1247\,d\,m^6}{2160}-\frac{13\,d^2\,m^6}{36}+\frac{59\,d^3\,m^6}{1080}+\frac{13\,d\,m^7}{504}-\frac{d^2\,m^7}{126}+\frac{d\,m^8}{2016}$$

In[140]:=

```
Expand[%137 /. {t → m - 3 * (d - 1)}]
```

Out[140]=

$$\frac{56\,633\,150\,341\,d}{169\,344\,000}-\frac{442\,557\,d^2}{560}+\frac{2\,633\,184\,227\,d^3}{3\,386\,880}-\frac{132\,921\,d^4}{320}+\frac{3\,159\,268\,339\,d^5}{24\,192\,000}-\frac{3873\,d^6}{160}+\frac{708\,973\,d^7}{282\,240}-\frac{303\,d^8}{2240}+\frac{9113\,d^9}{2\,352\,000}+\frac{147\,519\,d\,m}{280}-\frac{1\,185\,579\,d^2\,m}{1120}+\frac{1737\,d^3\,m}{2}-\frac{48\,231\,d^4\,m}{128}+\frac{3701\,d^5\,m}{40}-\frac{4027\,d^6\,m}{320}+\frac{239\,d^7\,m}{280}-\frac{101\,d^8\,m}{4480}+\frac{395\,193\,d\,m^2}{1120}-\frac{94\,653\,d^2\,m^2}{160}+\frac{15\,771\,d^3\,m^2}{40}-\frac{4275\,d^4\,m^2}{32}+\frac{11\,549\,d^5\,m^2}{480}-\frac{171\,d^6\,m^2}{80}+\frac{239\,d^7\,m^2}{3360}+\frac{10\,517\,d\,m^3}{80}-\frac{57\,317\,d^2\,m^3}{320}+\frac{373\,d^3\,m^3}{4}-\frac{1483\,d^4\,m^3}{64}+\frac{109\,d^5\,m^3}{40}-\frac{19\,d^6\,m^3}{160}+\frac{57\,317\,d\,m^4}{1920}-\frac{1017\,d^2\,m^4}{32}+\frac{1165\,d^3\,m^4}{96}-\frac{63\,d^4\,m^4}{32}+\frac{109\,d^5\,m^4}{960}+\frac{339\,d\,m^5}{80}-\frac{1059\,d^2\,m^5}{320}+\frac{33\,d^3\,m^5}{40}-\frac{21\,d^4\,m^5}{320}+\frac{353\,d\,m^6}{960}-\frac{3\,d^2\,m^6}{16}+\frac{11\,d^3\,m^6}{480}+\frac{d\,m^7}{56}-\frac{d^2\,m^7}{224}+\frac{d\,m^8}{2688}$$

In[141]:=

```
FunctionExpand[Binomial[m + 9, 9] - Binomial[9 + m - d, 9] -
  5 * (Binomial[m - 3 * (d - 1) + 9, 9] - Binomial[9 + m - 3 * (d - 1) - d, 9]) +
  4 * 6 * d * Binomial[8 + m - 3 * (d - 1), 8] - 3 * %138 + 2 * %139 - %140]
```

Out[141]=

$$-\frac{56\,633\,150\,341\,d}{169\,344\,000}+\frac{442\,557\,d^2}{560}-\frac{2\,633\,184\,227\,d^3}{3\,386\,880}+\frac{132\,921\,d^4}{320}-\frac{3\,159\,268\,339\,d^5}{24\,192\,000}+\frac{3873\,d^6}{160}-\frac{708\,973\,d^7}{282\,240}+\frac{303\,d^8}{2240}-\frac{9113\,d^9}{2\,352\,000}+\frac{1}{362\,880}(-9+d-m)(-8+d-m)(-7+d-m)(-6+d-m)(-5+d-m)(-4+d-m)(-3+d-m)(-2+d-m)(-1+d-m)+\frac{1}{1680}d(-11+3d-m)(-10+3d-m)(-9+3d-m)(-8+3d-m)(-7+3d-m)(-6+3d-m)(-5+3d-m)(-4+3d-m)+\frac{1}{72\,576}(-12+3d-m)(-11+3d-m)(-10+3d-m)(-9+3d-m)(-8+3d-m)(-7+3d-m)(-6+3d-m)(-5+3d-m)(-4+3d-m)-\frac{1}{72\,576}(-12+4d-m)(-11+4d-m)(-10+4d-m)(-9+4d-m)(-8+4d-m)(-7+4d-m)(-6+4d-m)(-5+4d-m)(-4+4d-m)-\frac{147\,519\,d\,m}{280}+\frac{1\,185\,579\,d^2\,m}{1120}-\frac{1737\,d^3\,m}{2}+\frac{48\,231\,d^4\,m}{128}-\frac{3701\,d^5\,m}{40}+\frac{4027\,d^6\,m}{320}-\frac{239\,d^7\,m}{280}+\frac{101\,d^8\,m}{4480}-\frac{395\,193\,d\,m^2}{1120}+\frac{94\,653\,d^2\,m^2}{160}-\frac{15\,771\,d^3\,m^2}{40}+\frac{4275\,d^4\,m^2}{32}-\frac{11\,549\,d^5\,m^2}{480}+\frac{171\,d^6\,m^2}{80}-\frac{239\,d^7\,m^2}{3360}-\frac{10\,517\,d\,m^3}{80}+\frac{57\,317\,d^2\,m^3}{320}-\frac{373\,d^3\,m^3}{4}+\frac{1483\,d^4\,m^3}{64}-$$

$$\frac{109\,d^5\,m^3}{40}+\frac{19\,d^6\,m^3}{160}-\frac{57\,317\,d\,m^4}{1920}+\frac{1017\,d^2\,m^4}{32}-\frac{1165\,d^3\,m^4}{96}+\frac{63\,d^4\,m^4}{32}-\frac{109\,d^5\,m^4}{960}-$$
$$\frac{339\,d\,m^5}{80}+\frac{1059\,d^2\,m^5}{320}-\frac{33\,d^3\,m^5}{40}+\frac{21\,d^4\,m^5}{320}-\frac{353\,d\,m^6}{960}+\frac{3\,d^2\,m^6}{16}-\frac{11\,d^3\,m^6}{480}-\frac{d\,m^7}{56}+$$
$$\frac{d^2\,m^7}{224}-\frac{d\,m^8}{2688}+\frac{(1+m)\,(2+m)\,(3+m)\,(4+m)\,(5+m)\,(6+m)\,(7+m)\,(8+m)\,(9+m)}{362\,880}-$$
$$3\left(\frac{233\,706\,519\,541\,d}{169\,344\,000}-\frac{70\,795\,d^2}{16}+\frac{4\,094\,734\,279\,d^3}{677\,376}-\frac{1\,765\,421\,d^4}{384}+\frac{51\,471\,019\,939\,d^5}{24\,192\,000}-\right.$$
$$\frac{117\,607\,d^6}{192}+\frac{30\,173\,569\,d^7}{282\,240}-\frac{3965\,d^8}{384}+\frac{995\,413\,d^9}{2\,352\,000}+\frac{14\,159\,d\,m}{8}-\frac{3\,274\,757\,d^2\,m}{672}+$$
$$\frac{1\,345\,099\,d^3\,m}{240}-\frac{1\,340\,591\,d^4\,m}{384}+\frac{76\,279\,d^5\,m}{60}-\frac{17\,295\,d^6\,m}{64}+\frac{1487\,d^7\,m}{48}-$$
$$\frac{3965\,d^8\,m}{2688}+\frac{3\,274\,757\,d\,m^2}{3360}-\frac{144\,599\,d^2\,m^2}{64}+\frac{340\,543\,d^3\,m^2}{160}-\frac{200\,305\,d^4\,m^2}{192}+$$
$$\frac{13\,463\,d^5\,m^2}{48}-\frac{1253\,d^6\,m^2}{32}+\frac{1487\,d^7\,m^2}{672}+\frac{144\,599\,d\,m^3}{480}-\frac{109\,837\,d^2\,m^3}{192}+$$
$$\frac{5089\,d^3\,m^3}{12}-\frac{29\,465\,d^4\,m^3}{192}+\frac{6503\,d^5\,m^3}{240}-\frac{179\,d^6\,m^3}{96}+\frac{109\,837\,d\,m^4}{1920}-$$
$$\frac{16\,415\,d^2\,m^4}{192}+\frac{1123\,d^3\,m^4}{24}-\frac{2135\,d^4\,m^4}{192}+\frac{929\,d^5\,m^4}{960}+\frac{3283\,d\,m^5}{480}-\frac{483\,d^2\,m^5}{64}+$$
$$\left.\frac{217\,d^3\,m^5}{80}-\frac{61\,d^4\,m^5}{192}+\frac{161\,d\,m^6}{320}-\frac{35\,d^2\,m^6}{96}+\frac{31\,d^3\,m^6}{480}+\frac{d\,m^7}{48}-\frac{5\,d^2\,m^7}{672}+\frac{d\,m^8}{2688}\right)+$$
$$2\left(\frac{53\,774\,422\,561\,d}{56\,448\,000}-\frac{13\,503\,659\,d^2}{5040}+\frac{32\,254\,026\,919\,d^3}{10\,160\,640}-\frac{37\,219\,d^4}{18}+\frac{19\,515\,901\,357\,d^5}{24\,192\,000}-\right.$$
$$\frac{137\,683\,d^6}{720}+\frac{22\,197\,769\,d^7}{846\,720}-\frac{221\,d^8}{126}+\frac{936\,319\,d^9}{31\,752\,000}+\frac{13\,503\,659\,d\,m}{10\,080}-$$
$$\frac{1\,741\,427\,d^2\,m}{540}+\frac{577\,057\,d^3\,m}{180}-\frac{1\,841\,407\,d^4\,m}{1080}+\frac{83\,499\,d^5\,m}{160}-\frac{98\,359\,d^6\,m}{1080}+$$
$$\frac{10\,309\,d^7\,m}{1260}-\frac{17\,d^8\,m}{63}+\frac{1\,741\,427\,d\,m^2}{2160}-\frac{195\,481\,d^2\,m^2}{120}+\frac{5\,713\,343\,d^3\,m^2}{4320}-$$
$$\frac{13\,247\,d^4\,m^2}{24}+\frac{179\,149\,d^5\,m^2}{1440}-\frac{2561\,d^6\,m^2}{180}+\frac{793\,d^7\,m^2}{1260}+\frac{195\,481\,d\,m^3}{720}-$$
$$\frac{60\,499\,d^2\,m^3}{135}+\frac{41\,119\,d^3\,m^3}{144}-\frac{9479\,d^4\,m^3}{108}+\frac{4667\,d^5\,m^3}{360}-\frac{197\,d^6\,m^3}{270}+\frac{60\,499\,d\,m^4}{1080}-$$
$$\frac{871\,d^2\,m^4}{12}+\frac{29\,431\,d^3\,m^4}{864}-\frac{247\,d^4\,m^4}{36}+\frac{359\,d^5\,m^4}{720}+\frac{871\,d\,m^5}{120}-\frac{1247\,d^2\,m^5}{180}+$$
$$\left.\frac{767\,d^3\,m^5}{360}-\frac{19\,d^4\,m^5}{90}+\frac{1247\,d\,m^6}{2160}-\frac{13\,d^2\,m^6}{36}+\frac{59\,d^3\,m^6}{1080}+\frac{13\,d\,m^7}{504}-\frac{d^2\,m^7}{126}+\frac{d\,m^8}{2016}\right)$$

In[142]:=

```
v0 = %141 /. {m → 0}
```

Out[142]=

$$1+\frac{(-9+d)(-8+d)(-7+d)(-6+d)(-5+d)(-4+d)(-3+d)(-2+d)(-1+d)}{362\,880}-\frac{56\,633\,150\,341\,d}{169\,344\,000}+\frac{442\,557\,d^2}{560}-\frac{2\,633\,184\,227\,d^3}{3\,386\,880}+\frac{132\,921\,d^4}{320}-\frac{3\,159\,268\,339\,d^5}{24\,192\,000}+\frac{3873\,d^6}{160}-\frac{708\,973\,d^7}{282\,240}+\frac{303\,d^8}{2240}-\frac{9113\,d^9}{2\,352\,000}+\frac{d(-11+3d)(-10+3d)(-9+3d)(-8+3d)(-7+3d)(-6+3d)(-5+3d)(-4+3d)}{1680}+\frac{1}{72\,576}(-12+3d)(-11+3d)(-10+3d)(-9+3d)(-8+3d)(-7+3d)(-6+3d)(-5+3d)(-4+3d)-\frac{1}{72\,576}(-12+4d)(-11+4d)(-10+4d)(-9+4d)(-8+4d)(-7+4d)(-6+4d)(-5+4d)(-4+4d)+2\left(\frac{53\,774\,422\,561\,d}{56\,448\,000}-\frac{13\,503\,659\,d^2}{5040}+\frac{32\,254\,026\,919\,d^3}{10\,160\,640}-\frac{37\,219\,d^4}{18}+\frac{19\,515\,901\,357\,d^5}{24\,192\,000}-\frac{137\,683\,d^6}{720}+\frac{22\,197\,769\,d^7}{846\,720}-\frac{221\,d^8}{126}+\frac{936\,319\,d^9}{31\,752\,000}\right)-3\left(\frac{233\,706\,519\,541\,d}{169\,344\,000}-\frac{70\,795\,d^2}{16}+\frac{4\,094\,734\,279\,d^3}{677\,376}-\frac{1\,765\,421\,d^4}{384}+\frac{51\,471\,019\,939\,d^5}{24\,192\,000}-\frac{117\,607\,d^6}{192}+\frac{30\,173\,569\,d^7}{282\,240}-\frac{3965\,d^8}{384}+\frac{995\,413\,d^9}{2\,352\,000}\right)$$

In[143]:=

```
Expand[%142]
```

Out[143]=

$$-\frac{287\,792\,399\,d}{84\,672\,000}+\frac{20\,131\,d^2}{672}-\frac{176\,741\,041\,d^3}{1\,693\,440}+\frac{11\,273\,d^4}{60}-\frac{2\,325\,800\,321\,d^5}{12\,096\,000}+\frac{3717\,d^6}{32}-\frac{5\,828\,903\,d^7}{141\,120}+\frac{2241\,d^8}{280}-\frac{127\,397\,d^9}{196\,000}$$

In[144]:=

```
Factor[%143]
```

Out[144]=

$$-\frac{1}{84\,672\,000}(-1+d)\,d\,(-1+2d)(-1+3d)\left(-287\,792\,399+809\,751\,606\,d-812\,826\,025\,d^2+397\,479\,390\,d^3-96\,129\,996\,d^4+9\,172\,584\,d^5\right)$$

In[145]:=

```
v1 = %141 /. {m → 1}
```

Out[145]=

$$10+\frac{(-10+d)(-9+d)(-8+d)(-7+d)(-6+d)(-5+d)(-4+d)(-3+d)(-2+d)}{362\,880}-\frac{233\,706\,519\,541\,d}{169\,344\,000}+\frac{42\,477\,d^2}{16}-\frac{7\,269\,851\,171\,d^3}{3\,386\,880}+\frac{608\,629\,d^4}{640}-\frac{6\,048\,372\,739\,d^5}{24\,192\,000}+\frac{2499\,d^6}{64}-\frac{969\,961\,d^7}{282\,240}+\frac{101\,d^8}{640}-\frac{9113\,d^9}{2\,352\,000}+\frac{d(-12+3d)(-11+3d)(-10+3d)(-9+3d)(-8+3d)(-7+3d)(-6+3d)(-5+3d)}{1680}+\frac{1}{72\,576}(-13+3d)(-12+3d)(-11+3d)(-10+3d)(-9+3d)(-8+3d)(-7+3d)(-6+3d)(-5+3d)-\frac{1}{72\,576}(-13+4d)(-12+4d)(-11+4d)(-10+4d)(-9+4d)(-8+4d)(-7+4d)(-6+4d)(-5+4d)+2\left(\frac{193\,835\,787\,361\,d}{56\,448\,000}-\frac{8\,125\,681\,d^2}{1008}+\frac{81\,535\,191\,271\,d^3}{10\,160\,640}-\frac{159\,103\,d^4}{36}+\frac{35\,476\,338\,157\,d^5}{24\,192\,000}-\frac{42\,805\,d^6}{144}+\frac{29\,658\,313\,d^7}{846\,720}-\frac{85\,d^8}{42}+\frac{936\,319\,d^9}{31\,752\,000}\right)-3\left(\frac{760\,421\,169\,541\,d}{169\,344\,000}-\frac{342\,235\,d^2}{28}+\frac{9\,653\,705\,095\,d^3}{677\,376}-\frac{446\,243\,d^4}{48}+\frac{89\,690\,977\,939\,d^5}{24\,192\,000}-\frac{22\,171\,d^6}{24}+\frac{39\,541\,669\,d^7}{282\,240}-\frac{3965\,d^8}{336}+\frac{995\,413\,d^9}{2\,352\,000}\right)$$

In[146]:=

```
Expand[%145]
```

Out[146]=

$$-\frac{445\,115\,999\,d}{84\,672\,000}+\frac{50\,941\,d^2}{1120}-\frac{261\,568\,273\,d^3}{1\,693\,440}+\frac{64\,469\,d^4}{240}-\frac{3\,176\,829\,521\,d^5}{12\,096\,000}+\frac{71\,801\,d^6}{480}-\frac{6\,985\,247\,d^7}{141\,120}+\frac{2467\,d^8}{280}-\frac{127\,397\,d^9}{196\,000}$$

In[147]:=

```
Factor[%146]
```

Out[147]=

$$-\frac{1}{84\,672\,000}(-1+d)\,d\,(-1+2d)(-1+3d)\left(-445\,115\,999+1\,180\,443\,606\,d-1\,099\,476\,025\,d^2+492\,231\,390\,d^3-107\,520\,396\,d^4+9\,172\,584\,d^5\right)$$

In[148]:=

```
v2 = %141 /. {m → 2}
```

Out[148]=

$$55+\frac{(-11+d)(-10+d)(-9+d)(-8+d)(-7+d)(-6+d)(-5+d)(-4+d)(-3+d)}{362\,880}-\frac{760\,421\,169\,541\,d}{169\,344\,000}+\frac{205\,341\,d^2}{28}-\frac{17\,136\,255\,971\,d^3}{3\,386\,880}+\frac{153\,787\,d^4}{80}-\frac{10\,535\,610\,739\,d^5}{24\,192\,000}+\frac{471\,d^6}{8}-\frac{1\,271\,101\,d^7}{282\,240}+\frac{101\,d^8}{560}-\frac{9113\,d^9}{2\,352\,000}+\frac{d(-13+3d)(-12+3d)(-11+3d)(-10+3d)(-9+3d)(-8+3d)(-7+3d)(-6+3d)}{1680}+\frac{1}{72\,576}(-14+3d)(-13+3d)(-12+3d)(-11+3d)(-10+3d)(-9+3d)(-8+3d)(-7+3d)(-6+3d)-\frac{1}{72\,576}(-14+4d)(-13+4d)(-12+4d)(-11+4d)(-10+4d)(-9+4d)(-8+4d)(-7+4d)(-6+4d)+2\left(\frac{575\,641\,726\,561\,d}{56\,448\,000}-\frac{104\,012\,171\,d^2}{5040}+\frac{180\,629\,429\,479\,d^3}{10\,160\,640}-\frac{34\,017\,d^4}{4}+\frac{59\,506\,789\,357\,d^5}{24\,192\,000}-\frac{104\,669\,d^6}{240}+\frac{38\,184\,649\,d^7}{846\,720}-\frac{289\,d^8}{126}+\frac{936\,319\,d^9}{31\,752\,000}\right)-3\left(\frac{2\,099\,435\,492\,341\,d}{169\,344\,000}-\frac{3\,294\,891\,d^2}{112}+\frac{20\,321\,276\,359\,d^3}{677\,376}-\frac{2\,197\,569\,d^4}{128}+\frac{145\,742\,405\,539\,d^5}{24\,192\,000}-\frac{84\,771\,d^6}{64}+\frac{50\,158\,849\,d^7}{282\,240}-\frac{11\,895\,d^8}{896}+\frac{995\,413\,d^9}{2\,352\,000}\right)$$

In[149]:=

```
Expand[%148]
```

Out[149]=

$$-\frac{650\,571\,599\,d}{84\,672\,000}+\frac{220\,237\,d^2}{3360}-\frac{369\,532\,129\,d^3}{1\,693\,440}+\frac{88\,601\,d^4}{240}-\frac{4\,204\,258\,721\,d^5}{12\,096\,000}+\frac{90\,319\,d^6}{480}-\frac{8\,238\,359\,d^7}{141\,120}+\frac{2693\,d^8}{280}-\frac{127\,397\,d^9}{196\,000}$$

In[150]:=

```
Factor[%149]
```

Out[150]=

$$-\frac{1}{84\,672\,000}(-1+d)\,d\,(-1+2d)(-1+3d)\left(-650\,571\,599+1\,646\,542\,806\,d-1\,441\,062\,025\,d^2+596\,660\,190\,d^3-118\,910\,796\,d^4+9\,172\,584\,d^5\right)$$

In[151]:=

```
DZ = Expand[%124 * d]
```

Out[151]=

$$-\frac{3\,d}{40}+\frac{23\,d^2}{40}-\frac{13\,d^3}{8}+\frac{17\,d^4}{8}-\frac{13\,d^5}{10}+\frac{3\,d^6}{10}$$

In[152]:=

```
KH2 = Expand[4 * v1 - 2 * v2 - 2 * v0 + 2 * DZ]
```

Out[152]=

$$\frac{829\,d}{840} - \frac{317\,d^2}{40} + \frac{963\,d^3}{40} - \frac{283\,d^4}{8} + \frac{797\,d^5}{30} - \frac{97\,d^6}{10} + \frac{48\,d^7}{35}$$

In[153]:=

```
Factor[%152]
```

Out[153]=

$$\frac{1}{840}\,(-1+d)\,d\,(-1+2\,d)\,(-1+3\,d)\,\left(-829+1683\,d-1006\,d^2+192\,d^3\right)$$

In[154]:=

```
K2HHc2 = Expand[12 * v1 - 12 * v0 - 2 * DZ + 3 * KH2]
```

Out[154]=

$$-\frac{1343\,d}{70} + \frac{45\,189\,d^2}{280} - \frac{4205\,d^3}{8} + \frac{34\,339\,d^4}{40} - \frac{30\,479\,d^5}{40} + \frac{7429\,d^6}{20} - \frac{1319\,d^7}{14} + \frac{339\,d^8}{35}$$

In[155]:=

```
Factor[%154]
```

Out[155]=

$$\frac{1}{280}\,(-1+d)\,d\,(-1+2\,d)\,(-1+3\,d)\,\left(5372-12\,957\,d+10\,341\,d^2-3568\,d^3+452\,d^4\right)$$

In[156]:=

```
Hc2 = (1 / 4) * (-(393 - 253 * d + 40 * d^2) * DZ + (19 * d - 55) * KH2)
```

Out[156]=

$$\frac{1}{4}\left(\left(-393+253\,d-40\,d^2\right)\left(-\frac{3\,d}{40}+\frac{23\,d^2}{40}-\frac{13\,d^3}{8}+\frac{17\,d^4}{8}-\frac{13\,d^5}{10}+\frac{3\,d^6}{10}\right)+(-55+19\,d)\left(\frac{829\,d}{840}-\frac{317\,d^2}{40}+\frac{963\,d^3}{40}-\frac{283\,d^4}{8}+\frac{797\,d^5}{30}-\frac{97\,d^6}{10}+\frac{48\,d^7}{35}\right)\right)$$

In[157]:=

```
Expand[%156]
```

Out[157]=

$$-\frac{5209\,d}{840} + \frac{5504\,d^2}{105} - \frac{1719\,d^3}{10} + \frac{5669\,d^4}{20} - \frac{30\,593\,d^5}{120} + \frac{7597\,d^6}{60} - \frac{2307\,d^7}{70} + \frac{123\,d^8}{35}$$

In[158]:=

```
Factor[%157]
```

Out[158]=

$$\frac{1}{840}\,(-1+d)\,d\,(-1+2\,d)\,(-1+3\,d)\,\left(5209-12\,778\,d+10\,429\,d^2-3712\,d^3+492\,d^4\right)$$

In[159]:=

```
K2H = K2HHc2 - Hc2
```

Out[159]=

$$-\frac{1343\,d}{70}+\frac{45\,189\,d^2}{280}-\frac{4205\,d^3}{8}+\frac{34\,339\,d^4}{40}-\frac{30\,479\,d^5}{40}+\frac{7429\,d^6}{20}-\frac{1319\,d^7}{14}+\frac{339\,d^8}{35}+\frac{1}{4}\left(-\left(\left(-393+253\,d-40\,d^2\right)\left(-\frac{3\,d}{40}+\frac{23\,d^2}{40}-\frac{13\,d^3}{8}+\frac{17\,d^4}{8}-\frac{13\,d^5}{10}+\frac{3\,d^6}{10}\right)\right)-(-55+19\,d)\left(\frac{829\,d}{840}-\frac{317\,d^2}{40}+\frac{963\,d^3}{40}-\frac{283\,d^4}{8}+\frac{797\,d^5}{30}-\frac{97\,d^6}{10}+\frac{48\,d^7}{35}\right)\right)$$

In[160]:=

```
Expand[%159]
```

Out[160]=

$$-\frac{10\,907\,d}{840}+\frac{18\,307\,d^2}{168}-\frac{14\,149\,d^3}{40}+\frac{23\,001\,d^4}{40}-\frac{15\,211\,d^5}{30}+\frac{1469\,d^6}{6}-\frac{2144\,d^7}{35}+\frac{216\,d^8}{35}$$

In[161]:=

```
Factor[%160]
```

Out[161]=

$$\frac{1}{840}(-1+d)\,d\,(-1+2\,d)\,(-1+3\,d)\,(-13+4\,d)\left(-839+1749\,d-1046\,d^2+216\,d^3\right)$$

In[162]:=

```
Kc2 = (1 / 4) * (-(393 - 253 * d + 40 * d^2) * KH2 + (19 * d - 55) * K2H)
```

Out[162]=

$$\frac{1}{4}\left(\left(-393+253\,d-40\,d^2\right)\left(\frac{829\,d}{840}-\frac{317\,d^2}{40}+\frac{963\,d^3}{40}-\frac{283\,d^4}{8}+\frac{797\,d^5}{30}-\frac{97\,d^6}{10}+\frac{48\,d^7}{35}\right)+(-55+19\,d)\left(-\frac{1343\,d}{70}+\frac{45\,189\,d^2}{280}-\frac{4205\,d^3}{8}+\frac{34\,339\,d^4}{40}-\frac{30\,479\,d^5}{40}+\frac{7429\,d^6}{20}-\frac{1319\,d^7}{14}+\frac{339\,d^8}{35}+\frac{1}{4}\left(-\left(\left(-393+253\,d-40\,d^2\right)\left(-\frac{3\,d}{40}+\frac{23\,d^2}{40}-\frac{13\,d^3}{8}+\frac{17\,d^4}{8}-\frac{13\,d^5}{10}+\frac{3\,d^6}{10}\right)\right)-(-55+19\,d)\left(\frac{829\,d}{840}-\frac{317\,d^2}{40}+\frac{963\,d^3}{40}-\frac{283\,d^4}{8}+\frac{797\,d^5}{30}-\frac{97\,d^6}{10}+\frac{48\,d^7}{35}\right)\right)\right)\right)$$

In[163]:=

```
Expand[%162]
```

Out[163]=

$$\frac{34\,261\,d}{420}-\frac{20\,131\,d^2}{28}+\frac{15\,029\,d^3}{6}-\frac{22\,546\,d^4}{5}+\frac{276\,881\,d^5}{60}-\frac{11\,151\,d^6}{4}+\frac{41\,635\,d^7}{42}-\frac{6723\,d^8}{35}+\frac{78\,d^9}{5}$$

In[164]:=

```
Factor[%163]
```

Out[164]=

$$\frac{1}{420}(-1+d)\,d\,(-1+2\,d)\,(-1+3\,d)\left(-34\,261+96\,399\,d-96\,765\,d^2+47\,319\,d^3-11\,444\,d^4+1092\,d^5\right)$$

In[165]:=

```
Expand[24 * v0 + Kc2]
```

Out[165]=

$$\frac{d}{3\,528\,000} - \frac{d^3}{70\,560} + \frac{79\,d^5}{504\,000} - \frac{d^7}{1960} + \frac{9\,d^9}{24\,500}$$

In[166]:=

```
Factor[%165]
```

Out[166]=

$$\frac{(-1+d)\,d\,(1+d)\,(-1+2\,d)\,(1+2\,d)\,(-1+3\,d)\,(1+3\,d)\,(-1+6\,d)\,(1+6\,d)}{3\,528\,000}$$