```
In[ ]:= ClearAll["Global`*"]


        (* Define Infinitesimal Representations by this order
              a1+a2, a1, a2, -a1, -a2, -a1-a2, 0, 0
         *)

In[ ]:= LB[x_, y_] := x.y - y.x;

In[ ]:= ConstantArray[0, {8, 8}]

Out[ ]= {{0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}}
```

$$X3 = \left\{\left\{0, 0, 0, -2\sqrt{3}, 2, 0, 0, 0\right\}, \{0, 0, 0, 0, 0, 0, -2, 0\},\right.$$
$$\left.\{0, 0, 0, 0, 0, 2, 0, 0\}, \left\{0, 0, 0, 0, 0, 0, 0, 2\sqrt{3}\right\}, \{0, 0, 0, 0, 0, 0, 0, -2\},\right.$$
$$\left.\{0, 0, 0, 0, 0, 0, 0, 0\}, \{0, 0, 0, 0, 0, 0, 0, 0\}, \{0, 0, 0, 0, 0, 0, 0, 0\}\right\};$$

$$Y3 = \left\{\{0, 0, 0, 0, 0, 0, 0, 0\}, \{0, 0, 0, 0, 0, 0, 0, 0\}, \{0, 0, 0, 0, 0, 0, 0, 0\},\right.$$
$$\left.\left\{2\sqrt{3}, 0, 0, 0, 0, 0, 0, 0\right\}, \{-2, 0, 0, 0, 0, 0, 0, 0\}, \{0, 0, 2, 0, 0, 0, 0, 0\},\right.$$
$$\left.\{0, -2, 0, 0, 0, 0, 0, 0\}, \left\{0, 0, 0, -2\sqrt{3}, 2, 0, 0, 0\right\}\right\};$$


```
H1 = {{1, 0, 0, 0, 0, 0, 0, 0}, {0, 2, 0, 0, 0, 0, 0, 0},
      {0, 0, -1, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
      {0, 0, 0, 0, 0, -2, 0, 0}, {0, 0, 0, 0, 0, 0, 1, 0}, {0, 0, 0, 0, 0, 0, 0, -1}};
H2 = {{1, 0, 0, 0, 0, 0, 0, 0}, {0, -1, 0, 0, 0, 0, 0, 0}, {0, 0, 2, 0, 0, 0, 0, 0},
      {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 1, 0, 0},
      {0, 0, 0, 0, 0, 0, -2, 0}, {0, 0, 0, 0, 0, 0, 0, -1}};

{{0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
 {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
 {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}}
```

```
In[ ]:= (* Adjoint Representations *)
      {{0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}};

      X1 = {{0, 1, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
          {0, 0, 0, 1, 2, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 1, 0},
          {0, 0, 0, 0, 0, 0, 0, 1}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}};
      Y1 = {{0, 0, 0, 0, 0, 0, 0, 0}, {1, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
          {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 1, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
          {0, 0, 0, 1, 2, 0, 0, 0}, {0, 0, 0, 0, 0, 1, 0, 0}};

      X2 = {{0, 0, 1, 0, 0, 0, 0, 0}, {0, 0, 0, 2, 1, 0, 0, 0},
          {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 1, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
          {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 1}, {0, 0, 0, 0, 0, 0, 0, 0}};
      Y2 = {{0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {1, 0, 0, 0, 0, 0, 0, 0},
          {0, 1, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 2, 1, 0, 0, 0},
          {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 1, 0}};

      X3 = {{0, 0, 0, 1, -1, 0, 0, 0}, {0, 0, 0, 0, 0, 0, -1, 0},
          {0, 0, 0, 0, 0, 1, 0, 0}, {0, 0, 0, 0, 0, 0, 0, -1}, {0, 0, 0, 0, 0, 0, 0, 1},
          {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}};
      Y3 = {{0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
          {1, 0, 0, 0, 0, 0, 0, 0}, {-1, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 1, 0, 0, 0, 0, 0},
          {0, -1, 0, 0, 0, 0, 0, 0}, {0, 0, 0, -1, 1, 0, 0, 0}};

      H1 = {{1, 0, 0, 0, 0, 0, 0, 0}, {0, -1, 0, 0, 0, 0, 0, 0},
          {0, 0, 2, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0},
          {0, 0, 0, 0, 0, 1, 0, 0}, {0, 0, 0, 0, 0, 0, -2, 0}, {0, 0, 0, 0, 0, 0, 0, -1}};
      H2 = {{1, 0, 0, 0, 0, 0, 0, 0}, {0, 2, 0, 0, 0, 0, 0, 0}, {0, 0, -1, 0, 0, 0, 0, 0},
          {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, 0, 0, 0}, {0, 0, 0, 0, 0, -2, 0, 0},
          {0, 0, 0, 0, 0, 0, 1, 0}, {0, 0, 0, 0, 0, 0, 0, -1}};

In[ ]:= LB[X3, Y1] // MatrixForm
```

Out[ ]//MatrixForm=

$$
\begin{pmatrix}
0 & 0 & -1 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & -2 & -1 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & -1 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0
\end{pmatrix}
$$

```
      (*h₁=1;h₂=1;x₁=1;y₁=1;x₂=1;y₂=1;x₃=1;y₃=1;*)
```

$In[\bullet]:=$ `M = i h₁ H1 + i h₂ H2 + x₁ (X1 - Y1) + i y₁ (X1 + Y1) +`
`    x₂ (X2 - Y2) + i y₂ (X2 + Y2) + x₃ (X3 - Y3) + i y₃ (X3 + Y3);`
`M // MatrixForm`

$Out[\bullet]//MatrixForm=$

$$
\begin{pmatrix}
i\,h_1 + i\,h_2 & x_1 + i\,y_1 & x_2 + i\,y_2 & x_3 + i\,y_3 & -x_3 - i\,y_3 & 0 & 0 \\
-x_1 + i\,y_1 & -i\,h_1 + 2\,i\,h_2 & 0 & 2\,x_2 + 2\,i\,y_2 & x_2 + i\,y_2 & 0 & -x_3 - i\,y_3 \\
-x_2 + i\,y_2 & 0 & 2\,i\,h_1 - i\,h_2 & x_1 + i\,y_1 & 2\,x_1 + 2\,i\,y_1 & x_3 + i\,y_3 & 0 \\
-x_3 + i\,y_3 & -x_2 + i\,y_2 & 0 & 0 & 0 & x_2 + i\,y_2 & 0 & -x \\
x_3 - i\,y_3 & 0 & -x_1 + i\,y_1 & 0 & 0 & 0 & x_1 + i\,y_1 & x_3 \\
0 & 0 & -x_3 + i\,y_3 & -2\,x_2 + 2\,i\,y_2 & -x_2 + i\,y_2 & i\,h_1 - 2\,i\,h_2 & 0 & x_1 \\
0 & x_3 - i\,y_3 & 0 & -x_1 + i\,y_1 & -2\,x_1 + 2\,i\,y_1 & 0 & -2\,i\,h_1 + i\,h_2 & x_2 \\
0 & 0 & 0 & x_3 - i\,y_3 & -x_3 + i\,y_3 & -x_1 + i\,y_1 & -x_2 + i\,y_2 & -i\,h
\end{pmatrix}
$$

$In[\bullet]:=$ `M1 = i h₁ H1 + x₁ (X1 - Y1) + i y₁ (X1 + Y1);`
`M1 // MatrixForm`

`M2 = i h₂ H2 + x₂ (X2 - Y2) + i y₂ (X2 + Y2);`
`M2 // MatrixForm`

`M3 = i h₃ (H1 + H2) + x₃ (X3 - Y3) + i y₃ (X3 + Y3);`
`M3 // MatrixForm`

$In[\bullet]:=$ `Eigenvalues[M] // MatrixForm`

$Out[\bullet]//MatrixForm=$

$$
\begin{pmatrix}
-\sqrt{\text{Root}\left[\#1^3 + 4\,h_1^6 - 12\,h_1^5\,h_2 - 3\,h_1^4\,h_2^2 + 26\,h_1^3\,h_2^3 - 3\,h_1^2\,h_2^4 - 12\,h_1\,h_2^5 + 4\,h_2^6 + 12\,h_1^4\,x_1^2 - 24\,h_1^3\,h_2\,x_1^2 - 18\,h_1^2\cdots\right.} \\
\sqrt{\text{Root}\left[\#1^3 + 4\,h_1^6 - 12\,h_1^5\,h_2 - 3\,h_1^4\,h_2^2 + 26\,h_1^3\,h_2^3 - 3\,h_1^2\,h_2^4 - 12\,h_1\,h_2^5 + 4\,h_2^6 + 12\,h_1^4\,x_1^2 - 24\,h_1^3\,h_2\,x_1^2 - 18\,h_1^2\,h\cdots\right.} \\
-\sqrt{\text{Root}\left[\#1^3 + 4\,h_1^6 - 12\,h_1^5\,h_2 - 3\,h_1^4\,h_2^2 + 26\,h_1^3\,h_2^3 - 3\,h_1^2\,h_2^4 - 12\,h_1\,h_2^5 + 4\,h_2^6 + 12\,h_1^4\,x_1^2 - 24\,h_1^3\,h_2\,x_1^2 - 18\,h_1^2\cdots\right.} \\
\sqrt{\text{Root}\left[\#1^3 + 4\,h_1^6 - 12\,h_1^5\,h_2 - 3\,h_1^4\,h_2^2 + 26\,h_1^3\,h_2^3 - 3\,h_1^2\,h_2^4 - 12\,h_1\,h_2^5 + 4\,h_2^6 + 12\,h_1^4\,x_1^2 - 24\,h_1^3\,h_2\,x_1^2 - 18\,h_1^2\,h\cdots\right.} \\
-\sqrt{\text{Root}\left[\#1^3 + 4\,h_1^6 - 12\,h_1^5\,h_2 - 3\,h_1^4\,h_2^2 + 26\,h_1^3\,h_2^3 - 3\,h_1^2\,h_2^4 - 12\,h_1\,h_2^5 + 4\,h_2^6 + 12\,h_1^4\,x_1^2 - 24\,h_1^3\,h_2\,x_1^2 - 18\,h_1^2\cdots\right.} \\
\sqrt{\text{Root}\left[\#1^3 + 4\,h_1^6 - 12\,h_1^5\,h_2 - 3\,h_1^4\,h_2^2 + 26\,h_1^3\,h_2^3 - 3\,h_1^2\,h_2^4 - 12\,h_1\,h_2^5 + 4\,h_2^6 + 12\,h_1^4\,x_1^2 - 24\,h_1^3\,h_2\,x_1^2 - 18\,h_1^2\,h\cdots\right.}
\end{pmatrix}
$$

`(*`
`    Tim's version of Nelson's Formula`
`*)`

$$f[p\_] := \sum_{q=0}^{p} \text{Binomial}[p, q]\,(-1)^{p-q}\,(p-q)!\,(d\gamma) * \text{If}[q == 0, 1, f[q-1]];$$

`i = 8; n = 8;`

$$A = \sum_{k=0}^{n-1} \sum_{j=0}^{n-k-1} \sum_{m=0}^{j} (-1)^{n-k-j-1} * \text{Binomial}[j, m] *$$
$$\left(\frac{(n-1)!}{(n-j+m-1)!}\right) * \text{If}[k == 0, \text{IdentityMatrix}[i], \text{MatrixPower}[M, k]] *$$
$$\text{Tr}[\text{Minors}[M, n-j-k-1]] * \text{If}[m == 0, 1, f[m-1]];$$

$In[\bullet]:=$ `A[[1, 1]] // Expand`

$Out[\bullet]=$ $5040 + 13068\,d\gamma + 13132\,d\gamma^2 + 6769\,d\gamma^3 + 1960\,d\gamma^4 + 322\,d\gamma^5 + 28\,d\gamma^6 + d\gamma^7 + 5040\,i\,h_1 + 8028\,i\,d\gamma\,h_1 +$
$5104\,i\,d\gamma^2\,h_1 + 1665\,i\,d\gamma^3\,h_1 + 295\,i\,d\gamma^4\,h_1 + 27\,i\,d\gamma^5\,h_1 + i\,d\gamma^6\,h_1 + 12600\,h_1^2 + 13770\,d\gamma\,h_1^2 +$
$5875\,d\gamma^2\,h_1^2 + 1225\,d\gamma^3\,h_1^2 + 125\,d\gamma^4\,h_1^2 + 5\,d\gamma^5\,h_1^2 + 4200\,i\,h_1^3 + 3190\,i\,d\gamma\,h_1^3 + 895\,i\,d\gamma^2\,h_1^3 +$
$110\,i\,d\gamma^3\,h_1^3 + 5\,i\,d\gamma^4\,h_1^3 + 840\,h_1^4 + 428\,d\gamma\,h_1^4 + 72\,d\gamma^2\,h_1^4 + 4\,d\gamma^3\,h_1^4 + 168\,i\,h_1^5 + 52\,i\,d\gamma\,h_1^5 +$

$$4\,\mathrm{i}\,d\gamma^2\,h_1^5 + 5040\,\mathrm{i}\,h_2 + 8028\,\mathrm{i}\,d\gamma\,h_2 + 5104\,\mathrm{i}\,d\gamma^2\,h_2 + 1665\,\mathrm{i}\,d\gamma^3\,h_2 + 295\,\mathrm{i}\,d\gamma^4\,h_2 + 27\,\mathrm{i}\,d\gamma^5\,h_2 +$$
$$\mathrm{i}\,d\gamma^6\,h_2 - 20160\,h_1\,h_2 - 22032\,d\gamma\,h_1\,h_2 - 9400\,d\gamma^2\,h_1\,h_2 - 1960\,d\gamma^3\,h_1\,h_2 - 200\,d\gamma^4\,h_1\,h_2 -$$
$$8\,d\gamma^5\,h_1\,h_2 - 2520\,\mathrm{i}\,h_1^2\,h_2 - 1914\,\mathrm{i}\,d\gamma\,h_1^2\,h_2 - 537\,\mathrm{i}\,d\gamma^2\,h_1^2\,h_2 - 66\,\mathrm{i}\,d\gamma^3\,h_1^2\,h_2 - 3\,\mathrm{i}\,d\gamma^4\,h_1^2\,h_2 -$$
$$4200\,h_1^3\,h_2 - 2140\,d\gamma\,h_1^3\,h_2 - 360\,d\gamma^2\,h_1^3\,h_2 - 20\,d\gamma^3\,h_1^3\,h_2 - 672\,\mathrm{i}\,h_1^4\,h_2 - 208\,\mathrm{i}\,d\gamma\,h_1^4\,h_2 -$$
$$16\,\mathrm{i}\,d\gamma^2\,h_1^4\,h_2 + 12600\,h_2^2 + 13770\,d\gamma\,h_2^2 + 5875\,d\gamma^2\,h_2^2 + 1225\,d\gamma^3\,h_2^2 + 125\,d\gamma^4\,h_2^2 + 5\,d\gamma^5\,h_2^2 -$$
$$2520\,\mathrm{i}\,h_1\,h_2^2 - 1914\,\mathrm{i}\,d\gamma\,h_1\,h_2^2 - 537\,\mathrm{i}\,d\gamma^2\,h_1\,h_2^2 - 66\,\mathrm{i}\,d\gamma^3\,h_1\,h_2^2 - 3\,\mathrm{i}\,d\gamma^4\,h_1\,h_2^2 + 6930\,h_1^2\,h_2^2 +$$
$$3531\,d\gamma\,h_1^2\,h_2^2 + 594\,d\gamma^2\,h_1^2\,h_2^2 + 33\,d\gamma^3\,h_1^2\,h_2^2 + 546\,\mathrm{i}\,h_1^3\,h_2^2 + 169\,\mathrm{i}\,d\gamma\,h_1^3\,h_2^2 + 13\,\mathrm{i}\,d\gamma^2\,h_1^3\,h_2^2 +$$
$$4200\,\mathrm{i}\,h_2^3 + 3190\,\mathrm{i}\,d\gamma\,h_2^3 + 895\,\mathrm{i}\,d\gamma^2\,h_2^3 + 110\,\mathrm{i}\,d\gamma^3\,h_2^3 + 5\,\mathrm{i}\,d\gamma^4\,h_2^3 - 4200\,h_1\,h_2^3 - 2140\,d\gamma\,h_1\,h_2^3 -$$
$$360\,d\gamma^2\,h_1\,h_2^3 - 20\,d\gamma^3\,h_1\,h_2^3 + 546\,\mathrm{i}\,h_1^2\,h_2^3 + 169\,\mathrm{i}\,d\gamma\,h_1^2\,h_2^3 + 13\,\mathrm{i}\,d\gamma^2\,h_1^2\,h_2^3 + 840\,h_2^4 + 428\,d\gamma\,h_2^4 +$$
$$72\,d\gamma^2\,h_2^4 + 4\,d\gamma^3\,h_2^4 - 672\,\mathrm{i}\,h_1\,h_2^4 - 208\,\mathrm{i}\,d\gamma\,h_1\,h_2^4 - 16\,\mathrm{i}\,d\gamma^2\,h_1\,h_2^4 + 168\,\mathrm{i}\,h_2^5 + 52\,\mathrm{i}\,d\gamma\,h_2^5 +$$
$$4\,\mathrm{i}\,d\gamma^2\,h_2^5 + 12600\,x_1^2 + 13770\,d\gamma\,x_1^2 + 5875\,d\gamma^2\,x_1^2 + 1225\,d\gamma^3\,x_1^2 + 125\,d\gamma^4\,x_1^2 + 5\,d\gamma^5\,x_1^2 +$$
$$4200\,\mathrm{i}\,h_1\,x_1^2 + 3190\,\mathrm{i}\,d\gamma\,h_1\,x_1^2 + 895\,\mathrm{i}\,d\gamma^2\,h_1\,x_1^2 + 110\,\mathrm{i}\,d\gamma^3\,h_1\,x_1^2 + 5\,\mathrm{i}\,d\gamma^4\,h_1\,x_1^2 + 1680\,h_1^2\,x_1^2 +$$
$$856\,d\gamma\,h_1^2\,x_1^2 + 144\,d\gamma^2\,h_1^2\,x_1^2 + 8\,d\gamma^3\,h_1^2\,x_1^2 + 336\,\mathrm{i}\,h_1^3\,x_1^2 + 104\,\mathrm{i}\,d\gamma\,h_1^3\,x_1^2 + 8\,\mathrm{i}\,d\gamma^2\,h_1^3\,x_1^2 +$$
$$1680\,\mathrm{i}\,h_2\,x_1^2 + 1276\,\mathrm{i}\,d\gamma\,h_2\,x_1^2 + 358\,\mathrm{i}\,d\gamma^2\,h_2\,x_1^2 + 44\,\mathrm{i}\,d\gamma^3\,h_2\,x_1^2 + 2\,\mathrm{i}\,d\gamma^4\,h_2\,x_1^2 - 4200\,h_1\,h_2\,x_1^2 -$$
$$2140\,d\gamma\,h_1\,h_2\,x_1^2 - 360\,d\gamma^2\,h_1\,h_2\,x_1^2 - 20\,d\gamma^3\,h_1\,h_2\,x_1^2 - 1008\,\mathrm{i}\,h_1^2\,h_2\,x_1^2 - 312\,\mathrm{i}\,d\gamma\,h_1^2\,h_2\,x_1^2 -$$
$$24\,\mathrm{i}\,d\gamma^2\,h_1^2\,h_2\,x_1^2 + 3570\,h_2^2\,x_1^2 + 1819\,d\gamma\,h_2^2\,x_1^2 + 306\,d\gamma^2\,h_2^2\,x_1^2 + 17\,d\gamma^3\,h_2^2\,x_1^2 + 378\,\mathrm{i}\,h_1\,h_2^2\,x_1^2 +$$
$$117\,\mathrm{i}\,d\gamma\,h_1\,h_2^2\,x_1^2 + 9\,\mathrm{i}\,d\gamma^2\,h_1\,h_2^2\,x_1^2 + 588\,\mathrm{i}\,h_2^3\,x_1^2 + 182\,\mathrm{i}\,d\gamma\,h_2^3\,x_1^2 + 14\,\mathrm{i}\,d\gamma^2\,h_2^3\,x_1^2 + 840\,x_1^4 + 428\,d\gamma\,x_1^4 +$$
$$72\,d\gamma^2\,x_1^4 + 4\,d\gamma^3\,x_1^4 + 168\,\mathrm{i}\,h_1\,x_1^4 + 52\,\mathrm{i}\,d\gamma\,h_1\,x_1^4 + 4\,\mathrm{i}\,d\gamma^2\,h_1\,x_1^4 - 336\,\mathrm{i}\,h_2\,x_1^4 - 104\,\mathrm{i}\,d\gamma\,h_2\,x_1^4 -$$
$$8\,\mathrm{i}\,d\gamma^2\,h_2\,x_1^4 + 12600\,x_2^2 + 13770\,d\gamma\,x_2^2 + 5875\,d\gamma^2\,x_2^2 + 1225\,d\gamma^3\,x_2^2 + 125\,d\gamma^4\,x_2^2 + 5\,d\gamma^5\,x_2^2 +$$
$$1680\,\mathrm{i}\,h_1\,x_2^2 + 1276\,\mathrm{i}\,d\gamma\,h_1\,x_2^2 + 358\,\mathrm{i}\,d\gamma^2\,h_1\,x_2^2 + 44\,\mathrm{i}\,d\gamma^3\,h_1\,x_2^2 + 2\,\mathrm{i}\,d\gamma^4\,h_1\,x_2^2 + 3570\,h_1^2\,x_2^2 +$$
$$1819\,d\gamma\,h_1^2\,x_2^2 + 306\,d\gamma^2\,h_1^2\,x_2^2 + 17\,d\gamma^3\,h_1^2\,x_2^2 + 588\,\mathrm{i}\,h_1^3\,x_2^2 + 182\,\mathrm{i}\,d\gamma\,h_1^3\,x_2^2 + 14\,\mathrm{i}\,d\gamma^2\,h_1^3\,x_2^2 +$$
$$4200\,\mathrm{i}\,h_2\,x_2^2 + 3190\,\mathrm{i}\,d\gamma\,h_2\,x_2^2 + 895\,\mathrm{i}\,d\gamma^2\,h_2\,x_2^2 + 110\,\mathrm{i}\,d\gamma^3\,h_2\,x_2^2 + 5\,\mathrm{i}\,d\gamma^4\,h_2\,x_2^2 - 4200\,h_1\,h_2\,x_2^2 -$$
$$2140\,d\gamma\,h_1\,h_2\,x_2^2 - 360\,d\gamma^2\,h_1\,h_2\,x_2^2 - 20\,d\gamma^3\,h_1\,h_2\,x_2^2 + 378\,\mathrm{i}\,h_1^2\,h_2\,x_2^2 + 117\,\mathrm{i}\,d\gamma\,h_1^2\,h_2\,x_2^2 +$$
$$9\,\mathrm{i}\,d\gamma^2\,h_1^2\,h_2\,x_2^2 + 1680\,h_2^2\,x_2^2 + 856\,d\gamma\,h_2^2\,x_2^2 + 144\,d\gamma^2\,h_2^2\,x_2^2 + 8\,d\gamma^3\,h_2^2\,x_2^2 - 1008\,\mathrm{i}\,h_1\,h_2^2\,x_2^2 -$$
$$312\,\mathrm{i}\,d\gamma\,h_1\,h_2^2\,x_2^2 - 24\,\mathrm{i}\,d\gamma^2\,h_1\,h_2^2\,x_2^2 + 336\,\mathrm{i}\,h_2^3\,x_2^2 + 104\,\mathrm{i}\,d\gamma\,h_2^3\,x_2^2 + 8\,\mathrm{i}\,d\gamma^2\,h_2^3\,x_2^2 + 2940\,x_1^2\,x_2^2 +$$
$$1498\,d\gamma\,x_1^2\,x_2^2 + 252\,d\gamma^2\,x_1^2\,x_2^2 + 14\,d\gamma^3\,x_1^2\,x_2^2 + 588\,\mathrm{i}\,h_1\,x_1^2\,x_2^2 + 182\,\mathrm{i}\,d\gamma\,h_1\,x_1^2\,x_2^2 + 14\,\mathrm{i}\,d\gamma^2\,h_1\,x_1^2\,x_2^2 +$$
$$42\,h_1^2\,x_1^2\,x_2^2 + 6\,d\gamma\,h_1^2\,x_1^2\,x_2^2 + 588\,\mathrm{i}\,h_2\,x_1^2\,x_2^2 + 182\,\mathrm{i}\,d\gamma\,h_2\,x_1^2\,x_2^2 + 14\,\mathrm{i}\,d\gamma^2\,h_2\,x_1^2\,x_2^2 - 42\,h_1\,h_2\,x_1^2\,x_2^2 -$$
$$6\,d\gamma\,h_1\,h_2\,x_1^2\,x_2^2 + 42\,h_2^2\,x_1^2\,x_2^2 + 6\,d\gamma\,h_2^2\,x_1^2\,x_2^2 + 42\,x_1^4\,x_2^2 + 6\,d\gamma\,x_1^4\,x_2^2 + 840\,x_2^4 + 428\,d\gamma\,x_2^4 + 72\,d\gamma^2\,x_2^4 +$$
$$4\,d\gamma^3\,x_2^4 - 336\,\mathrm{i}\,h_1\,x_2^4 - 104\,\mathrm{i}\,d\gamma\,h_1\,x_2^4 - 8\,\mathrm{i}\,d\gamma^2\,h_1\,x_2^4 + 168\,\mathrm{i}\,h_2\,x_2^4 + 52\,\mathrm{i}\,d\gamma\,h_2\,x_2^4 + 4\,\mathrm{i}\,d\gamma^2\,h_2\,x_2^4 +$$
$$42\,x_1^2\,x_2^4 + 6\,d\gamma\,x_1^2\,x_2^4 + 10080\,x_3^2 + 11016\,d\gamma\,x_3^2 + 4700\,d\gamma^2\,x_3^2 + 980\,d\gamma^3\,x_3^2 + 100\,d\gamma^4\,x_3^2 + 4\,d\gamma^5\,x_3^2 +$$
$$1680\,\mathrm{i}\,h_1\,x_3^2 + 1276\,\mathrm{i}\,d\gamma\,h_1\,x_3^2 + 358\,\mathrm{i}\,d\gamma^2\,h_1\,x_3^2 + 44\,\mathrm{i}\,d\gamma^3\,h_1\,x_3^2 + 2\,\mathrm{i}\,d\gamma^4\,h_1\,x_3^2 + 1260\,h_1^2\,x_3^2 +$$
$$642\,d\gamma\,h_1^2\,x_3^2 + 108\,d\gamma^2\,h_1^2\,x_3^2 + 6\,d\gamma^3\,h_1^2\,x_3^2 - 168\,\mathrm{i}\,h_1^3\,x_3^2 - 52\,\mathrm{i}\,d\gamma\,h_1^3\,x_3^2 - 4\,\mathrm{i}\,d\gamma^2\,h_1^3\,x_3^2 + 56\,h_1^4\,x_3^2 +$$
$$8\,d\gamma\,h_1^4\,x_3^2 + 1680\,\mathrm{i}\,h_2\,x_3^2 + 1276\,\mathrm{i}\,d\gamma\,h_2\,x_3^2 + 358\,\mathrm{i}\,d\gamma^2\,h_2\,x_3^2 + 44\,\mathrm{i}\,d\gamma^3\,h_2\,x_3^2 + 2\,\mathrm{i}\,d\gamma^4\,h_2\,x_3^2 -$$
$$1260\,h_1\,h_2\,x_3^2 - 642\,d\gamma\,h_1\,h_2\,x_3^2 - 108\,d\gamma^2\,h_1\,h_2\,x_3^2 - 6\,d\gamma^3\,h_1\,h_2\,x_3^2 + 252\,\mathrm{i}\,h_1^2\,h_2\,x_3^2 + 78\,\mathrm{i}\,d\gamma\,h_1^2\,h_2\,x_3^2 +$$
$$6\,\mathrm{i}\,d\gamma^2\,h_1^2\,h_2\,x_3^2 - 280\,h_1^3\,h_2\,x_3^2 - 40\,d\gamma\,h_1^3\,h_2\,x_3^2 + 1260\,h_2^2\,x_3^2 + 642\,d\gamma\,h_2^2\,x_3^2 + 108\,d\gamma^2\,h_2^2\,x_3^2 +$$
$$6\,d\gamma^3\,h_2^2\,x_3^2 + 252\,\mathrm{i}\,h_1\,h_2^2\,x_3^2 + 78\,\mathrm{i}\,d\gamma\,h_1\,h_2^2\,x_3^2 + 6\,\mathrm{i}\,d\gamma^2\,h_1\,h_2^2\,x_3^2 + 462\,h_1^2\,h_2^2\,x_3^2 + 66\,d\gamma\,h_1^2\,h_2^2\,x_3^2 -$$
$$168\,\mathrm{i}\,h_2^3\,x_3^2 - 52\,\mathrm{i}\,d\gamma\,h_2^3\,x_3^2 - 4\,\mathrm{i}\,d\gamma^2\,h_2^3\,x_3^2 - 280\,h_1\,h_2^3\,x_3^2 - 40\,d\gamma\,h_1\,h_2^3\,x_3^2 + 56\,h_2^4\,x_3^2 + 8\,d\gamma\,h_2^4\,x_3^2 +$$
$$1890\,x_1^2\,x_3^2 + 963\,d\gamma\,x_1^2\,x_3^2 + 162\,d\gamma^2\,x_1^2\,x_3^2 + 9\,d\gamma^3\,x_1^2\,x_3^2 - 168\,\mathrm{i}\,h_1\,x_1^2\,x_3^2 - 52\,\mathrm{i}\,d\gamma\,h_1\,x_1^2\,x_3^2 -$$
$$4\,\mathrm{i}\,d\gamma^2\,h_1\,x_1^2\,x_3^2 + 70\,h_1^2\,x_1^2\,x_3^2 + 10\,d\gamma\,h_1^2\,x_1^2\,x_3^2 + 462\,\mathrm{i}\,h_2\,x_1^2\,x_3^2 + 143\,\mathrm{i}\,d\gamma\,h_2\,x_1^2\,x_3^2 + 11\,\mathrm{i}\,d\gamma^2\,h_2\,x_1^2\,x_3^2 -$$
$$238\,h_1\,h_2\,x_1^2\,x_3^2 - 34\,d\gamma\,h_1\,h_2\,x_1^2\,x_3^2 + 196\,h_2^2\,x_1^2\,x_3^2 + 28\,d\gamma\,h_2^2\,x_1^2\,x_3^2 + 14\,x_1^4\,x_3^2 + 2\,d\gamma\,x_1^4\,x_3^2 + 1890\,x_2^2\,x_3^2 +$$
$$963\,d\gamma\,x_2^2\,x_3^2 + 162\,d\gamma^2\,x_2^2\,x_3^2 + 9\,d\gamma^3\,x_2^2\,x_3^2 + 462\,\mathrm{i}\,h_1\,x_2^2\,x_3^2 + 143\,\mathrm{i}\,d\gamma\,h_1\,x_2^2\,x_3^2 + 11\,\mathrm{i}\,d\gamma^2\,h_1\,x_2^2\,x_3^2 +$$
$$196\,h_1^2\,x_2^2\,x_3^2 + 28\,d\gamma\,h_1^2\,x_2^2\,x_3^2 - 168\,\mathrm{i}\,h_2\,x_2^2\,x_3^2 - 52\,\mathrm{i}\,d\gamma\,h_2\,x_2^2\,x_3^2 - 4\,\mathrm{i}\,d\gamma^2\,h_2\,x_2^2\,x_3^2 - 238\,h_1\,h_2\,x_2^2\,x_3^2 -$$
$$34\,d\gamma\,h_1\,h_2\,x_2^2\,x_3^2 + 70\,h_2^2\,x_2^2\,x_3^2 + 10\,d\gamma\,h_2^2\,x_2^2\,x_3^2 + 70\,x_1^2\,x_2^2\,x_3^2 + 10\,d\gamma\,x_1^2\,x_2^2\,x_3^2 + 14\,x_2^4\,x_3^2 + 2\,d\gamma\,x_2^4\,x_3^2 +$$
$$1050\,x_3^4 + 535\,d\gamma\,x_3^4 + 90\,d\gamma^2\,x_3^4 + 5\,d\gamma^3\,x_3^4 + 42\,\mathrm{i}\,h_1\,x_3^4 + 13\,\mathrm{i}\,d\gamma\,h_1\,x_3^4 + \mathrm{i}\,d\gamma^2\,h_1\,x_3^4 - 56\,h_1^2\,x_3^4 -$$
$$8\,d\gamma\,h_1^2\,x_3^4 + 42\,\mathrm{i}\,h_2\,x_3^4 + 13\,\mathrm{i}\,d\gamma\,h_2\,x_3^4 + \mathrm{i}\,d\gamma^2\,h_2\,x_3^4 + 140\,h_1\,h_2\,x_3^4 + 20\,d\gamma\,h_1\,h_2\,x_3^4 - 56\,h_2^2\,x_3^4 -$$
$$8\,d\gamma\,h_2^2\,x_3^4 + 28\,x_1^2\,x_3^4 + 4\,d\gamma\,x_1^2\,x_3^4 + 28\,x_2^2\,x_3^4 + 4\,d\gamma\,x_2^2\,x_3^4 + 14\,x_3^6 + 2\,d\gamma\,x_3^6 - 1260\,h_1\,x_2\,x_3\,y_1 -$$
$$642\,d\gamma\,h_1\,x_2\,x_3\,y_1 - 108\,d\gamma^2\,h_1\,x_2\,x_3\,y_1 - 6\,d\gamma^3\,h_1\,x_2\,x_3\,y_1 - 756\,\mathrm{i}\,h_1^2\,x_2\,x_3\,y_1 - 234\,\mathrm{i}\,d\gamma\,h_1^2\,x_2\,x_3\,y_1 -$$
$$18\,\mathrm{i}\,d\gamma^2\,h_1^2\,x_2\,x_3\,y_1 + 84\,h_1^3\,x_2\,x_3\,y_1 + 12\,d\gamma\,h_1^3\,x_2\,x_3\,y_1 + 1260\,h_2\,x_2\,x_3\,y_1 + 642\,d\gamma\,h_2\,x_2\,x_3\,y_1 +$$

$$108\, d\gamma^2\, h_2\, x_2\, x_3\, y_1 + 6\, d\gamma^3\, h_2\, x_2\, x_3\, y_1 - 294\, h_1^2\, h_2\, x_2\, x_3\, y_1 - 42\, d\gamma\, h_1^2\, h_2\, x_2\, x_3\, y_1 + 756\, \mathfrak{i}\, h_2^2\, x_2\, x_3\, y_1 +$$
$$234\, \mathfrak{i}\, d\gamma\, h_2^2\, x_2\, x_3\, y_1 + 18\, \mathfrak{i}\, d\gamma^2\, h_2^2\, x_2\, x_3\, y_1 + 294\, h_1\, h_2^2\, x_2\, x_3\, y_1 + 42\, d\gamma\, h_1\, h_2^2\, x_2\, x_3\, y_1 -$$
$$84\, h_2^3\, x_2\, x_3\, y_1 - 12\, d\gamma\, h_2^3\, x_2\, x_3\, y_1 - 756\, \mathfrak{i}\, x_1^2\, x_2\, x_3\, y_1 - 234\, \mathfrak{i}\, d\gamma\, x_1^2\, x_2\, x_3\, y_1 - 18\, \mathfrak{i}\, d\gamma^2\, x_1^2\, x_2\, x_3\, y_1 +$$
$$84\, h_1\, x_1^2\, x_2\, x_3\, y_1 + 12\, d\gamma\, h_1\, x_1^2\, x_2\, x_3\, y_1 - 210\, h_2\, x_1^2\, x_2\, x_3\, y_1 - 30\, d\gamma\, h_2\, x_1^2\, x_2\, x_3\, y_1 + 756\, \mathfrak{i}\, x_2^3\, x_3\, y_1 +$$
$$234\, \mathfrak{i}\, d\gamma\, x_2^3\, x_3\, y_1 + 18\, \mathfrak{i}\, d\gamma^2\, x_2^3\, x_3\, y_1 + 210\, h_1\, x_2^3\, x_3\, y_1 + 30\, d\gamma\, h_1\, x_2^3\, x_3\, y_1 - 84\, h_2\, x_2^3\, x_3\, y_1 -$$
$$12\, d\gamma\, h_2\, x_2^3\, x_3\, y_1 - 294\, h_1\, x_2\, x_3^3\, y_1 - 42\, d\gamma\, h_1\, x_2\, x_3^3\, y_1 + 294\, h_2\, x_2\, x_3^3\, y_1 + 42\, d\gamma\, h_2\, x_2\, x_3^3\, y_1 +$$
$$12\,600\, y_1^2 + 13\,770\, d\gamma\, y_1^2 + 5875\, d\gamma^2\, y_1^2 + 1225\, d\gamma^3\, y_1^2 + 125\, d\gamma^4\, y_1^2 + 5\, d\gamma^5\, y_1^2 + 4200\, \mathfrak{i}\, h_1\, y_1^2 +$$
$$3190\, \mathfrak{i}\, d\gamma\, h_1\, y_1^2 + 895\, \mathfrak{i}\, d\gamma^2\, h_1\, y_1^2 + 110\, \mathfrak{i}\, d\gamma^3\, h_1\, y_1^2 + 5\, \mathfrak{i}\, d\gamma^4\, h_1\, y_1^2 + 1680\, h_1^2\, y_1^2 + 856\, d\gamma\, h_1^2\, y_1^2 +$$
$$144\, d\gamma^2\, h_1^2\, y_1^2 + 8\, d\gamma^3\, h_1^2\, y_1^2 + 336\, \mathfrak{i}\, h_1^3\, y_1^2 + 104\, \mathfrak{i}\, d\gamma\, h_1^3\, y_1^2 + 8\, \mathfrak{i}\, d\gamma^2\, h_1^3\, y_1^2 + 1680\, \mathfrak{i}\, h_2\, y_1^2 +$$
$$1276\, \mathfrak{i}\, d\gamma\, h_2\, y_1^2 + 358\, \mathfrak{i}\, d\gamma^2\, h_2\, y_1^2 + 44\, \mathfrak{i}\, d\gamma^3\, h_2\, y_1^2 + 2\, \mathfrak{i}\, d\gamma^4\, h_2\, y_1^2 - 4200\, h_1\, h_2\, y_1^2 - 2140\, d\gamma\, h_1\, h_2\, y_1^2 -$$
$$360\, d\gamma^2\, h_1\, h_2\, y_1^2 - 20\, d\gamma^3\, h_1\, h_2\, y_1^2 - 1008\, \mathfrak{i}\, h_1^2\, h_2\, y_1^2 - 312\, \mathfrak{i}\, d\gamma\, h_1^2\, h_2\, y_1^2 - 24\, \mathfrak{i}\, d\gamma^2\, h_1^2\, h_2\, y_1^2 +$$
$$3570\, h_2^2\, y_1^2 + 1819\, d\gamma\, h_2^2\, y_1^2 + 306\, d\gamma^2\, h_2^2\, y_1^2 + 17\, d\gamma^3\, h_2^2\, y_1^2 + 378\, \mathfrak{i}\, h_1\, h_2^2\, y_1^2 + 117\, \mathfrak{i}\, d\gamma\, h_1\, h_2^2\, y_1^2 +$$
$$9\, \mathfrak{i}\, d\gamma^2\, h_1\, h_2^2\, y_1^2 + 588\, \mathfrak{i}\, h_2^3\, y_1^2 + 182\, \mathfrak{i}\, d\gamma\, h_2^3\, y_1^2 + 14\, \mathfrak{i}\, d\gamma^2\, h_2^3\, y_1^2 + 1680\, x_1^2\, y_1^2 + 856\, d\gamma\, x_1^2\, y_1^2 +$$
$$144\, d\gamma^2\, x_1^2\, y_1^2 + 8\, d\gamma^3\, x_1^2\, y_1^2 + 336\, \mathfrak{i}\, h_1\, x_1^2\, y_1^2 + 104\, \mathfrak{i}\, d\gamma\, h_1\, x_1^2\, y_1^2 + 8\, \mathfrak{i}\, d\gamma^2\, h_1\, x_1^2\, y_1^2 - 672\, \mathfrak{i}\, h_2\, x_1^2\, y_1^2 -$$
$$208\, \mathfrak{i}\, d\gamma\, h_2\, x_1^2\, y_1^2 - 16\, \mathfrak{i}\, d\gamma^2\, h_2\, x_1^2\, y_1^2 + 2940\, x_2^2\, y_1^2 + 1498\, d\gamma\, x_2^2\, y_1^2 + 252\, d\gamma^2\, x_2^2\, y_1^2 + 14\, d\gamma^3\, x_2^2\, y_1^2 +$$
$$588\, \mathfrak{i}\, h_1\, x_2^2\, y_1^2 + 182\, \mathfrak{i}\, d\gamma\, h_1\, x_2^2\, y_1^2 + 14\, \mathfrak{i}\, d\gamma^2\, h_1\, x_2^2\, y_1^2 + 42\, h_1^2\, x_2^2\, y_1^2 + 6\, d\gamma\, h_1^2\, x_2^2\, y_1^2 + 588\, \mathfrak{i}\, h_2\, x_2^2\, y_1^2 +$$
$$182\, \mathfrak{i}\, d\gamma\, h_2\, x_2^2\, y_1^2 + 14\, \mathfrak{i}\, d\gamma^2\, h_2\, x_2^2\, y_1^2 - 42\, h_1\, h_2\, x_2^2\, y_1^2 - 6\, d\gamma\, h_1\, h_2\, x_2^2\, y_1^2 + 42\, h_2^2\, x_2^2\, y_1^2 + 6\, d\gamma\, h_2^2\, x_2^2\, y_1^2 +$$
$$84\, x_1^2\, x_2^2\, y_1^2 + 12\, d\gamma\, x_1^2\, x_2^2\, y_1^2 + 42\, x_2^4\, y_1^2 + 6\, d\gamma\, x_2^4\, y_1^2 + 1890\, x_3^2\, y_1^2 + 963\, d\gamma\, x_3^2\, y_1^2 + 162\, d\gamma^2\, x_3^2\, y_1^2 +$$
$$9\, d\gamma^3\, x_3^2\, y_1^2 - 168\, \mathfrak{i}\, h_1\, x_3^2\, y_1^2 - 52\, \mathfrak{i}\, d\gamma\, h_1\, x_3^2\, y_1^2 - 4\, \mathfrak{i}\, d\gamma^2\, h_1\, x_3^2\, y_1^2 + 70\, h_1^2\, x_3^2\, y_1^2 + 10\, d\gamma\, h_1^2\, x_3^2\, y_1^2 +$$
$$462\, \mathfrak{i}\, h_2\, x_3^2\, y_1^2 + 143\, \mathfrak{i}\, d\gamma\, h_2\, x_3^2\, y_1^2 + 11\, \mathfrak{i}\, d\gamma^2\, h_2\, x_3^2\, y_1^2 - 238\, h_1\, h_2\, x_3^2\, y_1^2 - 34\, d\gamma\, h_1\, h_2\, x_3^2\, y_1^2 +$$
$$196\, h_2^2\, x_3^2\, y_1^2 + 28\, d\gamma\, h_2^2\, x_3^2\, y_1^2 + 28\, x_1^2\, x_3^2\, y_1^2 + 4\, d\gamma\, x_1^2\, x_3^2\, y_1^2 - 182\, x_2^2\, x_3^2\, y_1^2 - 26\, d\gamma\, x_2^2\, x_3^2\, y_1^2 +$$
$$28\, x_3^4\, y_1^2 + 4\, d\gamma\, x_3^4\, y_1^2 - 756\, \mathfrak{i}\, x_2\, x_3\, y_1^3 - 234\, \mathfrak{i}\, d\gamma\, x_2\, x_3\, y_1^3 - 18\, \mathfrak{i}\, d\gamma^2\, x_2\, x_3\, y_1^3 + 84\, h_1\, x_2\, x_3\, y_1^3 +$$
$$12\, d\gamma\, h_1\, x_2\, x_3\, y_1^3 - 210\, h_2\, x_2\, x_3\, y_1^3 - 30\, d\gamma\, h_2\, x_2\, x_3\, y_1^3 + 840\, y_1^4 + 428\, d\gamma\, y_1^4 + 72\, d\gamma^2\, y_1^4 + 4\, d\gamma^3\, y_1^4 +$$
$$168\, \mathfrak{i}\, h_1\, y_1^4 + 52\, \mathfrak{i}\, d\gamma\, h_1\, y_1^4 + 4\, \mathfrak{i}\, d\gamma^2\, h_1\, y_1^4 - 336\, \mathfrak{i}\, h_2\, y_1^4 - 104\, \mathfrak{i}\, d\gamma\, h_2\, y_1^4 - 8\, \mathfrak{i}\, d\gamma^2\, h_2\, y_1^4 + 42\, x_2^2\, y_1^4 +$$
$$6\, d\gamma\, x_2^2\, y_1^4 + 14\, x_3^2\, y_1^4 + 2\, d\gamma\, x_3^2\, y_1^4 - 1260\, h_1\, x_1\, x_3\, y_2 - 642\, d\gamma\, h_1\, x_1\, x_3\, y_2 - 108\, d\gamma^2\, h_1\, x_1\, x_3\, y_2 -$$
$$6\, d\gamma^3\, h_1\, x_1\, x_3\, y_2 - 756\, \mathfrak{i}\, h_1^2\, x_1\, x_3\, y_2 - 234\, \mathfrak{i}\, d\gamma\, h_1^2\, x_1\, x_3\, y_2 - 18\, \mathfrak{i}\, d\gamma^2\, h_1^2\, x_1\, x_3\, y_2 + 84\, h_1^3\, x_1\, x_3\, y_2 +$$
$$12\, d\gamma\, h_1^3\, x_1\, x_3\, y_2 + 1260\, h_2\, x_1\, x_3\, y_2 + 642\, d\gamma\, h_2\, x_1\, x_3\, y_2 + 108\, d\gamma^2\, h_2\, x_1\, x_3\, y_2 + 6\, d\gamma^3\, h_2\, x_1\, x_3\, y_2 -$$
$$294\, h_1^2\, h_2\, x_1\, x_3\, y_2 - 42\, d\gamma\, h_1^2\, h_2\, x_1\, x_3\, y_2 + 756\, \mathfrak{i}\, h_2^2\, x_1\, x_3\, y_2 + 234\, \mathfrak{i}\, d\gamma\, h_2^2\, x_1\, x_3\, y_2 + 18\, \mathfrak{i}\, d\gamma^2\, h_2^2\, x_1\, x_3\, y_2 +$$
$$294\, h_1\, h_2^2\, x_1\, x_3\, y_2 + 42\, d\gamma\, h_1\, h_2^2\, x_1\, x_3\, y_2 - 84\, h_2^3\, x_1\, x_3\, y_2 - 12\, d\gamma\, h_2^3\, x_1\, x_3\, y_2 - 756\, \mathfrak{i}\, x_1^3\, x_3\, y_2 -$$
$$234\, \mathfrak{i}\, d\gamma\, x_1^3\, x_3\, y_2 - 18\, \mathfrak{i}\, d\gamma^2\, x_1^3\, x_3\, y_2 + 84\, h_1\, x_1^3\, x_3\, y_2 + 12\, d\gamma\, h_1\, x_1^3\, x_3\, y_2 - 210\, h_2\, x_1^3\, x_3\, y_2 -$$
$$30\, d\gamma\, h_2\, x_1^3\, x_3\, y_2 + 756\, \mathfrak{i}\, x_1\, x_2^2\, x_3\, y_2 + 234\, \mathfrak{i}\, d\gamma\, x_1\, x_2^2\, x_3\, y_2 + 18\, \mathfrak{i}\, d\gamma^2\, x_1\, x_2^2\, x_3\, y_2 + 210\, h_1\, x_1\, x_2^2\, x_3\, y_2 +$$
$$30\, d\gamma\, h_1\, x_1\, x_2^2\, x_3\, y_2 - 84\, h_2\, x_1\, x_2^2\, x_3\, y_2 - 12\, d\gamma\, h_2\, x_1\, x_2^2\, x_3\, y_2 - 294\, h_1\, x_1\, x_3^3\, y_2 - 42\, d\gamma\, h_1\, x_1\, x_3^3\, y_2 +$$
$$294\, h_2\, x_1\, x_3^3\, y_2 + 42\, d\gamma\, h_2\, x_1\, x_3^3\, y_2 - 504\, x_1\, x_2\, x_3^3\, y_1\, y_2 - 72\, d\gamma\, x_1\, x_2\, x_3^3\, y_1\, y_2 - 756\, \mathfrak{i}\, x_1\, x_3\, y_1^2\, y_2 -$$
$$234\, \mathfrak{i}\, d\gamma\, x_1\, x_3\, y_1^2\, y_2 - 18\, \mathfrak{i}\, d\gamma^2\, x_1\, x_3\, y_1^2\, y_2 + 84\, h_1\, x_1\, x_3\, y_1^2\, y_2 + 12\, d\gamma\, h_1\, x_1\, x_3\, y_1^2\, y_2 - 210\, h_2\, x_1\, x_3\, y_1^2\, y_2 -$$
$$30\, d\gamma\, h_2\, x_1\, x_3\, y_1^2\, y_2 + 12\,600\, y_2^2 + 13\,770\, d\gamma\, y_2^2 + 5875\, d\gamma^2\, y_2^2 + 1225\, d\gamma^3\, y_2^2 + 125\, d\gamma^4\, y_2^2 + 5\, d\gamma^5\, y_2^2 +$$
$$1680\, \mathfrak{i}\, h_1\, y_2^2 + 1276\, \mathfrak{i}\, d\gamma\, h_1\, y_2^2 + 358\, \mathfrak{i}\, d\gamma^2\, h_1\, y_2^2 + 44\, \mathfrak{i}\, d\gamma^3\, h_1\, y_2^2 + 2\, \mathfrak{i}\, d\gamma^4\, h_1\, y_2^2 + 3570\, h_1^2\, y_2^2 +$$
$$1819\, d\gamma\, h_1^2\, y_2^2 + 306\, d\gamma^2\, h_1^2\, y_2^2 + 17\, d\gamma^3\, h_1^2\, y_2^2 + 588\, \mathfrak{i}\, h_1^3\, y_2^2 + 182\, \mathfrak{i}\, d\gamma\, h_1^3\, y_2^2 + 14\, \mathfrak{i}\, d\gamma^2\, h_1^3\, y_2^2 +$$
$$4200\, \mathfrak{i}\, h_2\, y_2^2 + 3190\, \mathfrak{i}\, d\gamma\, h_2\, y_2^2 + 895\, \mathfrak{i}\, d\gamma^2\, h_2\, y_2^2 + 110\, \mathfrak{i}\, d\gamma^3\, h_2\, y_2^2 + 5\, \mathfrak{i}\, d\gamma^4\, h_2\, y_2^2 - 4200\, h_1\, h_2\, y_2^2 -$$
$$2140\, d\gamma\, h_1\, h_2\, y_2^2 - 360\, d\gamma^2\, h_1\, h_2\, y_2^2 - 20\, d\gamma^3\, h_1\, h_2\, y_2^2 + 378\, \mathfrak{i}\, h_1^2\, h_2\, y_2^2 + 117\, \mathfrak{i}\, d\gamma\, h_1^2\, h_2\, y_2^2 +$$
$$9\, \mathfrak{i}\, d\gamma^2\, h_1^2\, h_2\, y_2^2 + 1680\, h_2^2\, y_2^2 + 856\, d\gamma\, h_2^2\, y_2^2 + 144\, d\gamma^2\, h_2^2\, y_2^2 + 8\, d\gamma^3\, h_2^2\, y_2^2 - 1008\, \mathfrak{i}\, h_1\, h_2^2\, y_2^2 -$$
$$312\, \mathfrak{i}\, d\gamma\, h_1\, h_2^2\, y_2^2 - 24\, \mathfrak{i}\, d\gamma^2\, h_1\, h_2^2\, y_2^2 + 336\, \mathfrak{i}\, h_2^3\, y_2^2 + 104\, \mathfrak{i}\, d\gamma\, h_2^3\, y_2^2 + 8\, \mathfrak{i}\, d\gamma^2\, h_2^3\, y_2^2 + 2940\, x_1^2\, y_2^2 +$$
$$1498\, d\gamma\, x_1^2\, y_2^2 + 252\, d\gamma^2\, x_1^2\, y_2^2 + 14\, d\gamma^3\, x_1^2\, y_2^2 + 588\, \mathfrak{i}\, h_1\, x_1^2\, y_2^2 + 182\, \mathfrak{i}\, d\gamma\, h_1\, x_1^2\, y_2^2 + 14\, \mathfrak{i}\, d\gamma^2\, h_1\, x_1^2\, y_2^2 +$$
$$42\, h_1^2\, x_1^2\, y_2^2 + 6\, d\gamma\, h_1^2\, x_1^2\, y_2^2 + 588\, \mathfrak{i}\, h_2\, x_1^2\, y_2^2 + 182\, \mathfrak{i}\, d\gamma\, h_2\, x_1^2\, y_2^2 + 14\, \mathfrak{i}\, d\gamma^2\, h_2\, x_1^2\, y_2^2 - 42\, h_1\, h_2\, x_1^2\, y_2^2 -$$
$$6\, d\gamma\, h_1\, h_2\, x_1^2\, y_2^2 + 42\, h_2^2\, x_1^2\, y_2^2 + 6\, d\gamma\, h_2^2\, x_1^2\, y_2^2 + 42\, x_1^4\, y_2^2 + 6\, d\gamma\, x_1^4\, y_2^2 + 1680\, x_2^2\, y_2^2 + 856\, d\gamma\, x_2^2\, y_2^2 +$$
$$144\, d\gamma^2\, x_2^2\, y_2^2 + 8\, d\gamma^3\, x_2^2\, y_2^2 - 672\, \mathfrak{i}\, h_1\, x_2^2\, y_2^2 - 208\, \mathfrak{i}\, d\gamma\, h_1\, x_2^2\, y_2^2 - 16\, \mathfrak{i}\, d\gamma^2\, h_1\, x_2^2\, y_2^2 + 336\, \mathfrak{i}\, h_2\, x_2^2\, y_2^2 +$$
$$104\, \mathfrak{i}\, d\gamma\, h_2\, x_2^2\, y_2^2 + 8\, \mathfrak{i}\, d\gamma^2\, h_2\, x_2^2\, y_2^2 + 84\, x_1^2\, x_2^2\, y_2^2 + 12\, d\gamma\, x_1^2\, x_2^2\, y_2^2 + 1890\, x_3^2\, y_2^2 + 963\, d\gamma\, x_3^2\, y_2^2 +$$
$$162\, d\gamma^2\, x_3^2\, y_2^2 + 9\, d\gamma^3\, x_3^2\, y_2^2 + 462\, \mathfrak{i}\, h_1\, x_3^2\, y_2^2 + 143\, \mathfrak{i}\, d\gamma\, h_1\, x_3^2\, y_2^2 + 11\, \mathfrak{i}\, d\gamma^2\, h_1\, x_3^2\, y_2^2 + 196\, h_1^2\, x_3^2\, y_2^2 +$$
$$28\, d\gamma\, h_1^2\, x_3^2\, y_2^2 - 168\, \mathfrak{i}\, h_2\, x_3^2\, y_2^2 - 52\, \mathfrak{i}\, d\gamma\, h_2\, x_3^2\, y_2^2 - 4\, \mathfrak{i}\, d\gamma^2\, h_2\, x_3^2\, y_2^2 - 238\, h_1\, h_2\, x_3^2\, y_2^2 - 34\, d\gamma\, h_1\, h_2\, x_3^2\, y_2^2 +$$

$$70\,h_2^2\,x_3^2\,y_2^2 + 10\,d\gamma\,h_2^2\,x_3^2\,y_2^2 - 182\,x_1^2\,x_3^2\,y_2^2 - 26\,d\gamma\,x_1^2\,x_3^2\,y_2^2 + 28\,x_2^2\,x_3^2\,y_2^2 + 4\,d\gamma\,x_2^2\,x_3^2\,y_2^2 + 28\,x_3^4\,y_2^2 +$$

$$4\,d\gamma\,x_3^4\,y_2^2 + 756\,i\,x_2\,x_3\,y_1\,y_2^2 + 234\,i\,d\gamma\,x_2\,x_3\,y_1\,y_2^2 + 18\,i\,d\gamma^2\,x_2\,x_3\,y_1\,y_2^2 + 210\,h_1\,x_2\,x_3\,y_1\,y_2^2 +$$

$$30\,d\gamma\,h_1\,x_2\,x_3\,y_1\,y_2^2 - 84\,h_2\,x_2\,x_3\,y_1\,y_2^2 - 12\,d\gamma\,h_2\,x_2\,x_3\,y_1\,y_2^2 + 2940\,y_1^2\,y_2^2 + 1498\,d\gamma\,y_1^2\,y_2^2 +$$

$$252\,d\gamma^2\,y_1^2\,y_2^2 + 14\,d\gamma^3\,y_1^2\,y_2^2 + 588\,i\,h_1\,y_1^2\,y_2^2 + 182\,i\,d\gamma\,h_1\,y_1^2\,y_2^2 + 14\,i\,d\gamma^2\,h_1\,y_1^2\,y_2^2 + 42\,h_1^2\,y_1^2\,y_2^2 +$$

$$6\,d\gamma\,h_1^2\,y_1^2\,y_2^2 + 588\,i\,h_2\,y_1^2\,y_2^2 + 182\,i\,d\gamma\,h_2\,y_1^2\,y_2^2 + 14\,i\,d\gamma^2\,h_2\,y_1^2\,y_2^2 - 42\,h_1\,h_2\,y_1^2\,y_2^2 - 6\,d\gamma\,h_1\,h_2\,y_1^2\,y_2^2 +$$

$$42\,h_2^2\,y_1^2\,y_2^2 + 6\,d\gamma\,h_2^2\,y_1^2\,y_2^2 + 84\,x_1^2\,y_1^2\,y_2^2 + 12\,d\gamma\,x_1^2\,y_1^2\,y_2^2 + 84\,x_2^2\,y_1^2\,y_2^2 + 12\,d\gamma\,x_2^2\,y_1^2\,y_2^2 + 70\,x_3^2\,y_1^2\,y_2^2 +$$

$$10\,d\gamma\,x_3^2\,y_1^2\,y_2^2 + 42\,y_1^4\,y_2^2 + 6\,d\gamma\,y_1^4\,y_2^2 + 756\,i\,x_1\,x_3\,y_2^3 + 234\,i\,d\gamma\,x_1\,x_3\,y_2^3 + 18\,i\,d\gamma^2\,x_1\,x_3\,y_2^3 +$$

$$210\,h_1\,x_1\,x_3\,y_2^3 + 30\,d\gamma\,h_1\,x_1\,x_3\,y_2^3 - 84\,h_2\,x_1\,x_3\,y_2^3 - 12\,d\gamma\,h_2\,x_1\,x_3\,y_2^3 + 840\,y_2^4 + 428\,d\gamma\,y_2^4 +$$

$$72\,d\gamma^2\,y_2^4 + 4\,d\gamma^3\,y_2^4 - 336\,i\,h_1\,y_2^4 - 104\,i\,d\gamma\,h_1\,y_2^4 - 8\,i\,d\gamma^2\,h_1\,y_2^4 + 168\,i\,h_2\,y_2^4 + 52\,i\,d\gamma\,h_2\,y_2^4 +$$

$$4\,i\,d\gamma^2\,h_2\,y_2^4 + 42\,x_1^2\,y_2^4 + 6\,d\gamma\,x_1^2\,y_2^4 + 14\,x_3^2\,y_2^4 + 2\,d\gamma\,x_3^2\,y_2^4 + 42\,y_1^2\,y_2^4 + 6\,d\gamma\,y_1^2\,y_2^4 + 1260\,h_1\,x_1\,x_2\,y_3 +$$

$$642\,d\gamma\,h_1\,x_1\,x_2\,y_3 + 108\,d\gamma^2\,h_1\,x_1\,x_2\,y_3 + 6\,d\gamma^3\,h_1\,x_1\,x_2\,y_3 + 756\,i\,h_1^2\,x_1\,x_2\,y_3 + 234\,i\,d\gamma\,h_1^2\,x_1\,x_2\,y_3 +$$

$$18\,i\,d\gamma^2\,h_1^2\,x_1\,x_2\,y_3 - 84\,h_1^3\,x_1\,x_2\,y_3 - 12\,d\gamma\,h_1^3\,x_1\,x_2\,y_3 - 1260\,h_2\,x_1\,x_2\,y_3 - 642\,d\gamma\,h_2\,x_1\,x_2\,y_3 -$$

$$108\,d\gamma^2\,h_2\,x_1\,x_2\,y_3 - 6\,d\gamma^3\,h_2\,x_1\,x_2\,y_3 + 294\,h_1^2\,h_2\,x_1\,x_2\,y_3 + 42\,d\gamma\,h_1^2\,h_2\,x_1\,x_2\,y_3 - 756\,i\,h_2^2\,x_1\,x_2\,y_3 -$$

$$234\,i\,d\gamma\,h_2^2\,x_1\,x_2\,y_3 - 18\,i\,d\gamma^2\,h_2^2\,x_1\,x_2\,y_3 - 294\,h_1\,h_2^2\,x_1\,x_2\,y_3 - 42\,d\gamma\,h_1\,h_2^2\,x_1\,x_2\,y_3 + 84\,h_2^3\,x_1\,x_2\,y_3 +$$

$$12\,d\gamma\,h_2^3\,x_1\,x_2\,y_3 + 756\,i\,x_1^3\,x_2\,y_3 + 234\,i\,d\gamma\,x_1^3\,x_2\,y_3 + 18\,i\,d\gamma^2\,x_1^3\,x_2\,y_3 - 84\,h_1\,x_1^3\,x_2\,y_3 -$$

$$12\,d\gamma\,h_1\,x_1^3\,x_2\,y_3 + 210\,h_2\,x_1^3\,x_2\,y_3 + 30\,d\gamma\,h_2\,x_1^3\,x_2\,y_3 - 756\,i\,x_1\,x_2^3\,y_3 - 234\,i\,d\gamma\,x_1\,x_2^3\,y_3 -$$

$$18\,i\,d\gamma^2\,x_1\,x_2^3\,y_3 - 210\,h_1\,x_1\,x_2^3\,y_3 - 30\,d\gamma\,h_1\,x_1\,x_2^3\,y_3 + 84\,h_2\,x_1\,x_2^3\,y_3 + 12\,d\gamma\,h_2\,x_1\,x_2^3\,y_3 +$$

$$294\,h_1\,x_1\,x_2\,x_3^2\,y_3 + 42\,d\gamma\,h_1\,x_1\,x_2\,x_3^2\,y_3 - 294\,h_2\,x_1\,x_2\,x_3^2\,y_3 - 42\,d\gamma\,h_2\,x_1\,x_2\,x_3^2\,y_3 + 504\,x_1\,x_2^2\,x_3\,y_1\,y_3 +$$

$$72\,d\gamma\,x_1\,x_2^2\,x_3\,y_1\,y_3 + 756\,i\,x_1\,x_2\,y_1^2\,y_3 + 234\,i\,d\gamma\,x_1\,x_2\,y_1^2\,y_3 + 18\,i\,d\gamma^2\,x_1\,x_2\,y_1^2\,y_3 - 84\,h_1\,x_1\,x_2\,y_1^2\,y_3 -$$

$$12\,d\gamma\,h_1\,x_1\,x_2\,y_1^2\,y_3 + 210\,h_2\,x_1\,x_2\,y_1^2\,y_3 + 30\,d\gamma\,h_2\,x_1\,x_2\,y_1^2\,y_3 + 504\,x_1^2\,x_2\,x_3\,y_2\,y_3 + 72\,d\gamma\,x_1^2\,x_2\,x_3\,y_2\,y_3 -$$

$$1260\,h_1\,y_1\,y_2\,y_3 - 642\,d\gamma\,h_1\,y_1\,y_2\,y_3 - 108\,d\gamma^2\,h_1\,y_1\,y_2\,y_3 - 6\,d\gamma^3\,h_1\,y_1\,y_2\,y_3 - 756\,i\,h_1^2\,y_1\,y_2\,y_3 -$$

$$234\,i\,d\gamma\,h_1^2\,y_1\,y_2\,y_3 - 18\,i\,d\gamma^2\,h_1^2\,y_1\,y_2\,y_3 + 84\,h_1^3\,y_1\,y_2\,y_3 + 12\,d\gamma\,h_1^3\,y_1\,y_2\,y_3 + 1260\,h_2\,y_1\,y_2\,y_3 +$$

$$642\,d\gamma\,h_2\,y_1\,y_2\,y_3 + 108\,d\gamma^2\,h_2\,y_1\,y_2\,y_3 + 6\,d\gamma^3\,h_2\,y_1\,y_2\,y_3 - 294\,h_1^2\,h_2\,y_1\,y_2\,y_3 - 42\,d\gamma\,h_1^2\,h_2\,y_1\,y_2\,y_3 +$$

$$756\,i\,h_2^2\,y_1\,y_2\,y_3 + 234\,i\,d\gamma\,h_2^2\,y_1\,y_2\,y_3 + 18\,i\,d\gamma^2\,h_2^2\,y_1\,y_2\,y_3 + 294\,h_1\,h_2^2\,y_1\,y_2\,y_3 + 42\,d\gamma\,h_1\,h_2^2\,y_1\,y_2\,y_3 -$$

$$84\,h_2^3\,y_1\,y_2\,y_3 - 12\,d\gamma\,h_2^3\,y_1\,y_2\,y_3 - 756\,i\,x_1^2\,y_1\,y_2\,y_3 - 234\,i\,d\gamma\,x_1^2\,y_1\,y_2\,y_3 - 18\,i\,d\gamma^2\,x_1^2\,y_1\,y_2\,y_3 +$$

$$84\,h_1\,x_1^2\,y_1\,y_2\,y_3 + 12\,d\gamma\,h_1\,x_1^2\,y_1\,y_2\,y_3 - 210\,h_2\,x_1^2\,y_1\,y_2\,y_3 - 30\,d\gamma\,h_2\,x_1^2\,y_1\,y_2\,y_3 + 756\,i\,x_2^2\,y_1\,y_2\,y_3 +$$

$$234\,i\,d\gamma\,x_2^2\,y_1\,y_2\,y_3 + 18\,i\,d\gamma^2\,x_2^2\,y_1\,y_2\,y_3 + 210\,h_1\,x_2^2\,y_1\,y_2\,y_3 + 30\,d\gamma\,h_1\,x_2^2\,y_1\,y_2\,y_3 -$$

$$84\,h_2\,x_2^2\,y_1\,y_2\,y_3 - 12\,d\gamma\,h_2\,x_2^2\,y_1\,y_2\,y_3 - 294\,h_1\,x_3^2\,y_1\,y_2\,y_3 - 42\,d\gamma\,h_1\,x_3^2\,y_1\,y_2\,y_3 + 294\,h_2\,x_3^2\,y_1\,y_2\,y_3 +$$

$$42\,d\gamma\,h_2\,x_3^2\,y_1\,y_2\,y_3 - 504\,x_2\,x_3\,y_1^2\,y_2\,y_3 - 72\,d\gamma\,x_2\,x_3\,y_1^2\,y_2\,y_3 - 756\,i\,y_1^3\,y_2\,y_3 - 234\,i\,d\gamma\,y_1^3\,y_2\,y_3 -$$

$$18\,i\,d\gamma^2\,y_1^3\,y_2\,y_3 + 84\,h_1\,y_1^3\,y_2\,y_3 + 12\,d\gamma\,h_1\,y_1^3\,y_2\,y_3 - 210\,h_2\,y_1^3\,y_2\,y_3 - 30\,d\gamma\,h_2\,y_1^3\,y_2\,y_3 -$$

$$756\,i\,x_1\,x_2\,y_2^2\,y_3 - 234\,i\,d\gamma\,x_1\,x_2\,y_2^2\,y_3 - 18\,i\,d\gamma^2\,x_1\,x_2\,y_2^2\,y_3 - 210\,h_1\,x_1\,x_2\,y_2^2\,y_3 - 30\,d\gamma\,h_1\,x_1\,x_2\,y_2^2\,y_3 +$$

$$84\,h_2\,x_1\,x_2\,y_2^2\,y_3 + 12\,d\gamma\,h_2\,x_1\,x_2\,y_2^2\,y_3 - 504\,x_1\,x_3\,y_1\,y_2^2\,y_3 - 72\,d\gamma\,x_1\,x_3\,y_1\,y_2^2\,y_3 + 756\,i\,y_1\,y_2^3\,y_3 +$$

$$234\,i\,d\gamma\,y_1\,y_2^3\,y_3 + 18\,i\,d\gamma^2\,y_1\,y_2^3\,y_3 + 210\,h_1\,y_1\,y_2^3\,y_3 + 30\,d\gamma\,h_1\,y_1\,y_2^3\,y_3 - 84\,h_2\,y_1\,y_2^3\,y_3 -$$

$$12\,d\gamma\,h_2\,y_1\,y_2^3\,y_3 + 10\,080\,y_3^2 + 11\,016\,d\gamma\,y_3^2 + 4700\,d\gamma^2\,y_3^2 + 980\,d\gamma^3\,y_3^2 + 100\,d\gamma^4\,y_3^2 + 4\,d\gamma^5\,y_3^2 +$$

$$1680\,i\,h_1\,y_3^2 + 1276\,i\,d\gamma\,h_1\,y_3^2 + 358\,i\,d\gamma^2\,h_1\,y_3^2 + 44\,i\,d\gamma^3\,h_1\,y_3^2 + 2\,i\,d\gamma^4\,h_1\,y_3^2 + 1260\,h_1^2\,y_3^2 +$$

$$642\,d\gamma\,h_1^2\,y_3^2 + 108\,d\gamma^2\,h_1^2\,y_3^2 + 6\,d\gamma^3\,h_1^2\,y_3^2 - 168\,i\,h_1^3\,y_3^2 - 52\,i\,d\gamma\,h_1^3\,y_3^2 - 4\,i\,d\gamma^2\,h_1^3\,y_3^2 + 56\,h_1^4\,y_3^2 +$$

$$8\,d\gamma\,h_1^4\,y_3^2 + 1680\,i\,h_2\,y_3^2 + 1276\,i\,d\gamma\,h_2\,y_3^2 + 358\,i\,d\gamma^2\,h_2\,y_3^2 + 44\,i\,d\gamma^3\,h_2\,y_3^2 + 2\,i\,d\gamma^4\,h_2\,y_3^2 -$$

$$1260\,h_1\,h_2\,y_3^2 - 642\,d\gamma\,h_1\,h_2\,y_3^2 - 108\,d\gamma^2\,h_1\,h_2\,y_3^2 - 6\,d\gamma^3\,h_1\,h_2\,y_3^2 + 252\,i\,h_1^2\,h_2\,y_3^2 + 78\,i\,d\gamma\,h_1^2\,h_2\,y_3^2 +$$

$$6\,i\,d\gamma^2\,h_1^2\,h_2\,y_3^2 - 280\,h_1^3\,h_2\,y_3^2 - 40\,d\gamma\,h_1^3\,h_2\,y_3^2 + 1260\,h_2^2\,y_3^2 + 642\,d\gamma\,h_2^2\,y_3^2 + 108\,d\gamma^2\,h_2^2\,y_3^2 +$$

$$6\,d\gamma^3\,h_2^2\,y_3^2 + 252\,i\,h_1\,h_2^2\,y_3^2 + 78\,i\,d\gamma\,h_1\,h_2^2\,y_3^2 + 6\,i\,d\gamma^2\,h_1\,h_2^2\,y_3^2 + 462\,h_1^2\,h_2^2\,y_3^2 + 66\,d\gamma\,h_1^2\,h_2^2\,y_3^2 -$$

$$168\,i\,h_2^3\,y_3^2 - 52\,i\,d\gamma\,h_2^3\,y_3^2 - 4\,i\,d\gamma^2\,h_2^3\,y_3^2 - 280\,h_1\,h_2^3\,y_3^2 - 40\,d\gamma\,h_1\,h_2^3\,y_3^2 + 56\,h_2^4\,y_3^2 + 8\,d\gamma\,h_2^4\,y_3^2 +$$

$$1890\,x_1^2\,y_3^2 + 963\,d\gamma\,x_1^2\,y_3^2 + 162\,d\gamma^2\,x_1^2\,y_3^2 + 9\,d\gamma^3\,x_1^2\,y_3^2 - 168\,i\,h_1\,x_1^2\,y_3^2 - 52\,i\,d\gamma\,h_1\,x_1^2\,y_3^2 -$$

$$4\,i\,d\gamma^2\,h_1\,x_1^2\,y_3^2 + 70\,h_1^2\,x_1^2\,y_3^2 + 10\,d\gamma\,h_1^2\,x_1^2\,y_3^2 + 462\,i\,h_2\,x_1^2\,y_3^2 + 143\,i\,d\gamma\,h_2\,x_1^2\,y_3^2 + 11\,i\,d\gamma^2\,h_2\,x_1^2\,y_3^2 -$$

$$238\,h_1\,h_2\,x_1^2\,y_3^2 - 34\,d\gamma\,h_1\,h_2\,x_1^2\,y_3^2 + 196\,h_2^2\,x_1^2\,y_3^2 + 28\,d\gamma\,h_2^2\,x_1^2\,y_3^2 + 14\,x_1^4\,y_3^2 + 2\,d\gamma\,x_1^4\,y_3^2 + 1890\,x_2^2\,y_3^2 +$$

$$963\,d\gamma\,x_2^2\,y_3^2 + 162\,d\gamma^2\,x_2^2\,y_3^2 + 9\,d\gamma^3\,x_2^2\,y_3^2 + 462\,i\,h_1\,x_2^2\,y_3^2 + 143\,i\,d\gamma\,h_1\,x_2^2\,y_3^2 + 11\,i\,d\gamma^2\,h_1\,x_2^2\,y_3^2 +$$

$$196\,h_1^2\,x_2^2\,y_3^2 + 28\,d\gamma\,h_1^2\,x_2^2\,y_3^2 - 168\,i\,h_2\,x_2^2\,y_3^2 - 52\,i\,d\gamma\,h_2\,x_2^2\,y_3^2 - 4\,i\,d\gamma^2\,h_2\,x_2^2\,y_3^2 - 238\,h_1\,h_2\,x_2^2\,y_3^2 -$$

$$34\,d\gamma\,h_1\,h_2\,x_2^2\,y_3^2 + 70\,h_2^2\,x_2^2\,y_3^2 + 10\,d\gamma\,h_2^2\,x_2^2\,y_3^2 - 182\,x_1^2\,x_2^2\,y_3^2 - 26\,d\gamma\,x_1^2\,x_2^2\,y_3^2 + 14\,x_2^4\,y_3^2 + 2\,d\gamma\,x_2^4\,y_3^2 +$$

$$2100\,x_3^2\,y_3^2 + 1070\,d\gamma\,x_3^2\,y_3^2 + 180\,d\gamma^2\,x_3^2\,y_3^2 + 10\,d\gamma^3\,x_3^2\,y_3^2 + 84\,i\,h_1\,x_3^2\,y_3^2 + 26\,i\,d\gamma\,h_1\,x_3^2\,y_3^2 +$$

$2 \, \dot{\imath} \, d\gamma^2 \, h_1 \, x_3^2 \, y_3^2 - 112 \, h_1^2 \, x_3^3 \, y_3^2 - 16 \, d\gamma \, h_1^2 \, x_3^2 \, y_3^2 + 84 \, \dot{\imath} \, h_2 \, x_3^2 \, y_3^2 + 26 \, \dot{\imath} \, d\gamma \, h_2 \, x_3^2 \, y_3^2 + 2 \, \dot{\imath} \, d\gamma^2 \, h_2 \, x_3^2 \, y_3^2 +$
$280 \, h_1 \, h_2 \, x_3^2 \, y_3^2 + 40 \, d\gamma \, h_1 \, h_2 \, x_3^2 \, y_3^2 - 112 \, h_2^2 \, x_3^2 \, y_3^2 - 16 \, d\gamma \, h_2^2 \, x_3^2 \, y_3^2 + 56 \, x_1^2 \, x_3^2 \, y_3^2 + 8 \, d\gamma \, x_1^2 \, x_3^2 \, y_3^2 +$
$56 \, x_2^2 \, x_3^2 \, y_3^2 + 8 \, d\gamma \, x_2^2 \, x_3^2 \, y_3^2 + 42 \, x_3^4 \, y_3^2 + 6 \, d\gamma \, x_3^4 \, y_3^2 - 294 \, h_1 \, x_2 \, x_3 \, y_1 \, y_3^2 - 42 \, d\gamma \, h_1 \, x_2 \, x_3 \, y_1 \, y_3^2 +$
$294 \, h_2 \, x_2 \, x_3 \, y_1 \, y_3^2 + 42 \, d\gamma \, h_2 \, x_2 \, x_3 \, y_1 \, y_3^2 + 1890 \, y_1^2 \, y_3^2 + 963 \, d\gamma \, y_1^2 \, y_3^2 + 162 \, d\gamma^2 \, y_1^2 \, y_3^2 +$
$9 \, d\gamma^3 \, y_1^2 \, y_3^2 - 168 \, \dot{\imath} \, h_1 \, y_1^2 \, y_3^2 - 52 \, \dot{\imath} \, d\gamma \, h_1 \, y_1^2 \, y_3^2 - 4 \, \dot{\imath} \, d\gamma^2 \, h_1 \, y_1^2 \, y_3^2 + 70 \, h_1^2 \, y_1^2 \, y_3^2 + 10 \, d\gamma \, h_1^2 \, y_1^2 \, y_3^2 +$
$462 \, \dot{\imath} \, h_2 \, y_1^2 \, y_3^2 + 143 \, \dot{\imath} \, d\gamma \, h_2 \, y_1^2 \, y_3^2 + 11 \, \dot{\imath} \, d\gamma^2 \, h_2 \, y_1^2 \, y_3^2 - 238 \, h_1 \, h_2 \, y_1^2 \, y_3^2 - 34 \, d\gamma \, h_1 \, h_2 \, y_1^2 \, y_3^2 +$
$196 \, h_2^2 \, y_1^2 \, y_3^2 + 28 \, d\gamma \, h_2^2 \, y_1^2 \, y_3^2 + 28 \, x_1^2 \, y_1^2 \, y_3^2 + 4 \, d\gamma \, x_1^2 \, y_1^2 \, y_3^2 + 70 \, x_2^2 \, y_1^2 \, y_3^2 + 10 \, d\gamma \, x_2^2 \, y_1^2 \, y_3^2 +$
$56 \, x_3^2 \, y_1^2 \, y_3^2 + 8 \, d\gamma \, x_3^2 \, y_1^2 \, y_3^2 + 14 \, y_1^4 \, y_3^2 + 2 \, d\gamma \, y_1^4 \, y_3^2 - 294 \, h_1 \, x_1 \, x_3 \, y_2 \, y_3^2 - 42 \, d\gamma \, h_1 \, x_1 \, x_3 \, y_2 \, y_3^2 +$
$294 \, h_2 \, x_1 \, x_3 \, y_2 \, y_3^2 + 42 \, d\gamma \, h_2 \, x_1 \, x_3 \, y_2 \, y_3^2 + 504 \, x_1 \, x_2 \, y_1 \, y_2 \, y_3^2 + 72 \, d\gamma \, x_1 \, x_2 \, y_1 \, y_2 \, y_3^2 + 1890 \, y_2^2 \, y_3^2 +$
$963 \, d\gamma \, y_2^2 \, y_3^2 + 162 \, d\gamma^2 \, y_2^2 \, y_3^2 + 9 \, d\gamma^3 \, y_2^2 \, y_3^2 + 462 \, \dot{\imath} \, h_1 \, y_2^2 \, y_3^2 + 143 \, \dot{\imath} \, d\gamma \, h_1 \, y_2^2 \, y_3^2 + 11 \, \dot{\imath} \, d\gamma^2 \, h_1 \, y_2^2 \, y_3^2 +$
$196 \, h_1^2 \, y_2^2 \, y_3^2 + 28 \, d\gamma \, h_1^2 \, y_2^2 \, y_3^2 - 168 \, \dot{\imath} \, h_2 \, y_2^2 \, y_3^2 - 52 \, \dot{\imath} \, d\gamma \, h_2 \, y_2^2 \, y_3^2 - 4 \, \dot{\imath} \, d\gamma^2 \, h_2 \, y_2^2 \, y_3^2 - 238 \, h_1 \, h_2 \, y_2^2 \, y_3^2 -$
$34 \, d\gamma \, h_1 \, h_2 \, y_2^2 \, y_3^2 + 70 \, h_2^2 \, y_2^2 \, y_3^2 + 10 \, d\gamma \, h_2^2 \, y_2^2 \, y_3^2 + 70 \, x_1^2 \, y_2^2 \, y_3^2 + 10 \, d\gamma \, x_1^2 \, y_2^2 \, y_3^2 + 28 \, x_2^2 \, y_2^2 \, y_3^2 +$
$4 \, d\gamma \, x_2^2 \, y_2^2 \, y_3^2 + 56 \, x_3^2 \, y_2^2 \, y_3^2 + 8 \, d\gamma \, x_3^2 \, y_2^2 \, y_3^2 - 182 \, y_1^2 \, y_2^2 \, y_3^2 - 26 \, d\gamma \, y_1^2 \, y_2^2 \, y_3^2 + 14 \, y_2^4 \, y_3^2 + 2 \, d\gamma \, y_2^4 \, y_3^2 +$
$294 \, h_1 \, x_1 \, x_2 \, y_3^3 + 42 \, d\gamma \, h_1 \, x_1 \, x_2 \, y_3^3 - 294 \, h_2 \, x_1 \, x_2 \, y_3^3 - 42 \, d\gamma \, h_2 \, x_1 \, x_2 \, y_3^3 - 294 \, h_1 \, y_1 \, y_2 \, y_3^3 -$
$42 \, d\gamma \, h_1 \, y_1 \, y_2 \, y_3^3 + 294 \, h_2 \, y_1 \, y_2 \, y_3^3 + 42 \, d\gamma \, h_2 \, y_1 \, y_2 \, y_3^3 + 1050 \, y_3^4 + 535 \, d\gamma \, y_3^4 + 90 \, d\gamma^2 \, y_3^4 + 5 \, d\gamma^3 \, y_3^4 +$
$42 \, \dot{\imath} \, h_1 \, y_3^4 + 13 \, \dot{\imath} \, d\gamma \, h_1 \, y_3^4 + \dot{\imath} \, d\gamma^2 \, h_1 \, y_3^4 - 56 \, h_1^2 \, y_3^4 - 8 \, d\gamma \, h_1^2 \, y_3^4 + 42 \, \dot{\imath} \, h_2 \, y_3^4 + 13 \, \dot{\imath} \, d\gamma \, h_2 \, y_3^4 +$
$\dot{\imath} \, d\gamma^2 \, h_2 \, y_3^4 + 140 \, h_1 \, h_2 \, y_3^4 + 20 \, d\gamma \, h_1 \, h_2 \, y_3^4 - 56 \, h_2^2 \, y_3^4 - 8 \, d\gamma \, h_2^2 \, y_3^4 + 28 \, x_1^2 \, y_3^4 + 4 \, d\gamma \, x_1^2 \, y_3^4 + 28 \, x_2^2 \, y_3^4 +$
$4 \, d\gamma \, x_2^2 \, y_3^4 + 42 \, x_3^2 \, y_3^4 + 6 \, d\gamma \, x_3^2 \, y_3^4 + 28 \, y_1^2 \, y_3^4 + 4 \, d\gamma \, y_1^2 \, y_3^4 + 28 \, y_2^2 \, y_3^4 + 4 \, d\gamma \, y_2^2 \, y_3^4 + 14 \, y_3^6 + 2 \, d\gamma \, y_3^6$

In[•]:= `(* Y`$^G_{\alpha_1}$ `π`$^{\lambda_1}_{1,1}$ `*)`
`k = 1;`
$-\left(-\dfrac{1}{2} \, \big(\, (2 \, y_1 - \dot{\imath} \, 2 \, x_1) \, D[A[\![1, k]\!], h_1] - (2 \, h_1 - h_2) \, D[A[\![1, k]\!], y_1] + \right.$

$\qquad \dot{\imath} \, (2 \, h_1 - h_2) \, D[A[\![1, k]\!], x_1] + (x_2 - \dot{\imath} \, y_2) \, D[A[\![1, k]\!], x_3] + (y_2 + \dot{\imath} \, x_2) \, D[A[\![1, k]\!], y_3] +$

$\qquad \left. (-x_3 - \dot{\imath} \, y_3) \, D[A[\![1, k]\!], x_2] + (-y_3 + \dot{\imath} \, x_3) \, D[A[\![1, k]\!], y_2]) \right)$ `// Expand`

In[•]:=

$5040 \, x_1 + 8028 \, d\gamma \, x_1 + 5104 \, d\gamma^2 \, x_1 + 1665 \, d\gamma^3 \, x_1 + 295 \, d\gamma^4 \, x_1 + 27 \, d\gamma^5 \, x_1 + d\gamma^6 \, x_1 + 4200 \, h_1^2 \, x_1 +$
$3190 \, d\gamma \, h_1^2 \, x_1 + 895 \, d\gamma^2 \, h_1^2 \, x_1 + 110 \, d\gamma^3 \, h_1^2 \, x_1 + 5 \, d\gamma^4 \, h_1^2 \, x_1 + 168 \, h_1^4 \, x_1 + 52 \, d\gamma \, h_1^4 \, x_1 +$
$4 \, d\gamma^2 \, h_1^4 \, x_1 + 7560 \, \dot{\imath} \, h_2 \, x_1 + 8262 \, \dot{\imath} \, d\gamma \, h_2 \, x_1 + 3525 \, \dot{\imath} \, d\gamma^2 \, h_2 \, x_1 + 735 \, \dot{\imath} \, d\gamma^3 \, h_2 \, x_1 +$
$75 \, \dot{\imath} \, d\gamma^4 \, h_2 \, x_1 + 3 \, \dot{\imath} \, d\gamma^5 \, h_2 \, x_1 - 4200 \, h_1 \, h_2 \, x_1 - 3190 \, d\gamma \, h_1 \, h_2 \, x_1 - 895 \, d\gamma^2 \, h_1 \, h_2 \, x_1 -$
$110 \, d\gamma^3 \, h_1 \, h_2 \, x_1 - 5 \, d\gamma^4 \, h_1 \, h_2 \, x_1 + 2520 \, \dot{\imath} \, h_1^2 \, h_2 \, x_1 + \boxed{\cdots \; 2078 \; \cdots} + 28 \, \dot{\imath} \, x_2 \, y_2^2 \, y_3^3 +$
$4 \, \dot{\imath} \, d\gamma \, x_2 \, y_2^2 \, y_3^3 + 28 \, y_2^3 \, y_3^3 + 4 \, d\gamma \, y_2^3 \, y_3^3 + 42 \, x_1 \, y_3^4 + 13 \, d\gamma \, x_1 \, y_3^4 + d\gamma^2 \, x_1 \, y_3^4 + 21 \, \dot{\imath} \, h_1 \, x_1 \, y_3^4 +$
$3 \, \dot{\imath} \, d\gamma \, h_1 \, x_1 \, y_3^4 - 21 \, \dot{\imath} \, h_2 \, x_1 \, y_3^4 - 3 \, \dot{\imath} \, d\gamma \, h_2 \, x_1 \, y_3^4 + 14 \, x_2 \, x_3 \, y_3^4 + 2 \, d\gamma \, x_2 \, x_3 \, y_3^4 + 42 \, \dot{\imath} \, y_1 \, y_3^4 +$
$13 \, \dot{\imath} \, d\gamma \, y_1 \, y_3^4 + \dot{\imath} \, d\gamma^2 \, y_1 \, y_3^4 - 21 \, h_1 \, y_1 \, y_3^4 - 3 \, d\gamma \, h_1 \, y_1 \, y_3^4 + 21 \, h_2 \, y_1 \, y_3^4 + 3 \, d\gamma \, h_2 \, y_1 \, y_3^4 -$
$14 \, \dot{\imath} \, x_3 \, y_2 \, y_3^4 - 2 \, \dot{\imath} \, d\gamma \, x_3 \, y_2 \, y_3^4 + 14 \, \dot{\imath} \, x_2 \, y_3^5 + 2 \, \dot{\imath} \, d\gamma \, x_2 \, y_3^5 + 14 \, y_2 \, y_3^5 + 2 \, d\gamma \, y_2 \, y_3^5$

large output | **show less** | **show more** | **show all** | **set size limit...**

Out[•]= 0

$In[\circ]:=$ (* $Y^G{}_{\alpha_1}$ $\pi^{\lambda_1}{}_{1,k}$ *)
    k = 2;
    $-\left(-\dfrac{1}{2}\right.$ ($(2\,y_1 - \dot{\mathbb{i}}\,2\,x_1)$ D[A[[1, k]], h_1] $-$ $(2\,h_1 - h_2)$ D[A[[1, k]], y_1] +
        $\dot{\mathbb{i}}$ $(2\,h_1 - h_2)$ D[A[[1, k]], x_1] + $(x_2 - \dot{\mathbb{i}}\,y_2)$ D[A[[1, k]], x_3] + $(y_2 + \dot{\mathbb{i}}\,x_2)$ D[A[[1, k]], y_3] +
        $(-x_3 - \dot{\mathbb{i}}\,y_3)$ D[A[[1, k]], x_2] + $(-y_3 + \dot{\mathbb{i}}\,x_3)$ D[A[[1, k]], y_2]) $\left.\right)$ // Expand

$Out[\circ]=$ 0

$In[\circ]:=$ (* $Y^G{}_{\alpha_1}$ $\pi^{\lambda_1}{}_{1,k}$ *)
    k = 3;
    $-\left(-\dfrac{1}{2}\right.$ ($(2\,y_1 - \dot{\mathbb{i}}\,2\,x_1)$ D[A[[1, k]], h_1] $-$ $(2\,h_1 - h_2)$ D[A[[1, k]], y_1] +
        $\dot{\mathbb{i}}$ $(2\,h_1 - h_2)$ D[A[[1, k]], x_1] + $(x_2 - \dot{\mathbb{i}}\,y_2)$ D[A[[1, k]], x_3] + $(y_2 + \dot{\mathbb{i}}\,x_2)$ D[A[[1, k]], y_3] +
        $(-x_3 - \dot{\mathbb{i}}\,y_3)$ D[A[[1, k]], x_2] + $(-y_3 + \dot{\mathbb{i}}\,x_3)$ D[A[[1, k]], y_2]) $\left.\right)$ // Expand

$In[\circ]:=$

$7560\,x_1\,x_2 + 8262\,d\gamma\,x_1\,x_2 + 3525\,d\gamma^2\,x_1\,x_2 + 735\,d\gamma^3\,x_1\,x_2 + 75\,d\gamma^4\,x_1\,x_2 + 3\,d\gamma^5\,x_1\,x_2 +$
$5040\,\dot{\mathbb{i}}\,h_1\,x_1\,x_2 + 3828\,\dot{\mathbb{i}}\,d\gamma\,h_1\,x_1\,x_2 + 1074\,\dot{\mathbb{i}}\,d\gamma^2\,h_1\,x_1\,x_2 + 132\,\dot{\mathbb{i}}\,d\gamma^3\,h_1\,x_1\,x_2 + 6\,\dot{\mathbb{i}}\,d\gamma^4\,h_1\,x_1\,x_2 +$
$630\,h_1^2\,x_1\,x_2 + 321\,d\gamma\,h_1^2\,x_1\,x_2 + 54\,d\gamma^2\,h_1^2\,x_1\,x_2 + 3\,d\gamma^3\,h_1^2\,x_1\,x_2 + 252\,\dot{\mathbb{i}}\,h_1^3\,x_1\,x_2 +$
$78\,\dot{\mathbb{i}}\,d\gamma\,h_1^3\,x_1\,x_2 + 6\,\dot{\mathbb{i}}\,d\gamma^2\,h_1^3\,x_1\,x_2 + 2520\,\dot{\mathbb{i}}\,h_2\,x_1\,x_2 + 1914\,\dot{\mathbb{i}}\,d\gamma\,h_2\,x_1\,x_2 + 537\,\dot{\mathbb{i}}\,d\gamma^2\,h_2\,x_1\,x_2 +$
$66\,\dot{\mathbb{i}}\,d\gamma^3\,h_2\,x_1\,x_2 +$ ⟨ ⋯ 2458 ⋯ ⟩ $+ 26\,d\gamma\,h_1\,y_2^2\,y_3^3 - 91\,h_2\,y_2^2\,y_3^3 - 13\,d\gamma\,h_2\,y_2^2\,y_3^3 + 84\,x_1\,x_2\,y_3^4 +$
$12\,d\gamma\,x_1\,x_2\,y_3^4 - 42\,x_3\,y_3^4 - 13\,d\gamma\,x_3\,y_3^4 - d\gamma^2\,x_3\,y_3^4 - 7\,\dot{\mathbb{i}}\,h_1\,x_3\,y_3^4 - \dot{\mathbb{i}}\,d\gamma\,h_1\,x_3\,y_3^4 - 7\,\dot{\mathbb{i}}\,h_2\,x_3\,y_3^4 -$
$\dot{\mathbb{i}}\,d\gamma\,h_2\,x_3\,y_3^4 - 42\,\dot{\mathbb{i}}\,x_2\,y_1\,y_3^4 - 6\,\dot{\mathbb{i}}\,d\gamma\,x_2\,y_1\,y_3^4 - 42\,\dot{\mathbb{i}}\,x_1\,y_2\,y_3^4 - 6\,\dot{\mathbb{i}}\,d\gamma\,x_1\,y_2\,y_3^4 - 84\,y_1\,y_2\,y_3^4 -$
$12\,d\gamma\,y_1\,y_2\,y_3^4 - 42\,\dot{\mathbb{i}}\,y_3^5 - 13\,\dot{\mathbb{i}}\,d\gamma\,y_3^5 - \dot{\mathbb{i}}\,d\gamma^2\,y_3^5 + 7\,h_1\,y_3^5 + d\gamma\,h_1\,y_3^5 + 7\,h_2\,y_3^5 + d\gamma\,h_2\,y_3^5$

large output   **show less**   **show more**   **show all**   **set size limit…**

$Out[\circ]=$ 0

$In[\circ]:=$ (* $Y^G{}_{\alpha_1}$ $\pi^{\lambda_1}{}_{1,k}$ *)
    k = 4;
    $-\left(-\dfrac{1}{2}\right.$ ($(2\,y_1 - \dot{\mathbb{i}}\,2\,x_1)$ D[A[[1, k]], h_1] $-$ $(2\,h_1 - h_2)$ D[A[[1, k]], y_1] +
        $\dot{\mathbb{i}}$ $(2\,h_1 - h_2)$ D[A[[1, k]], x_1] + $(x_2 - \dot{\mathbb{i}}\,y_2)$ D[A[[1, k]], x_3] + $(y_2 + \dot{\mathbb{i}}\,x_2)$ D[A[[1, k]], y_3] +
        $(-x_3 - \dot{\mathbb{i}}\,y_3)$ D[A[[1, k]], x_2] + $(-y_3 + \dot{\mathbb{i}}\,x_3)$ D[A[[1, k]], y_2]) $\left.\right)$ // Expand

$In[\circ]:=$

$2520\,x_1^2\,x_2 + 1914\,d\gamma\,x_1^2\,x_2 + 537\,d\gamma^2\,x_1^2\,x_2 + 66\,d\gamma^3\,x_1^2\,x_2 + 3\,d\gamma^4\,x_1^2\,x_2 + 126\,h_1^2\,x_1^2\,x_2 + 39\,d\gamma\,h_1^2\,x_1^2\,x_2 +$
$3\,d\gamma^2\,h_1^2\,x_1^2\,x_2 + 1260\,\dot{\mathbb{i}}\,h_2\,x_1^2\,x_2 + 642\,\dot{\mathbb{i}}\,d\gamma\,h_2\,x_1^2\,x_2 + 108\,\dot{\mathbb{i}}\,d\gamma^2\,h_2\,x_1^2\,x_2 + 6\,\dot{\mathbb{i}}\,d\gamma^3\,h_2\,x_1^2\,x_2 -$
$126\,h_1\,h_2\,x_1^2\,x_2 - 39\,d\gamma\,h_1\,h_2\,x_1^2\,x_2 - 3\,d\gamma^2\,h_1\,h_2\,x_1^2\,x_2 - 21\,\dot{\mathbb{i}}\,h_1^2\,h_2\,x_1^2\,x_2 - 3\,\dot{\mathbb{i}}\,d\gamma\,h_1^2\,h_2\,x_1^2\,x_2 +$
$126\,h_2^2\,x_1^2\,x_2 + 39\,d\gamma\,h_2^2\,x_1^2\,x_2 + 3\,d\gamma^2\,h_2^2\,x_1^2\,x_2 + 21\,\dot{\mathbb{i}}\,h_1\,h_2^2\,x_1^2\,x_2 + 3\,\dot{\mathbb{i}}\,d\gamma\,h_1\,h_2^2\,x_1^2\,x_2 + 42\,\dot{\mathbb{i}}\,h_2^3\,x_1^2\,x_2 +$
$6\,\dot{\mathbb{i}}\,d\gamma\,h_2^3\,x_1^2\,x_2 +$ ⟨ ⋯ 2184 ⋯ ⟩ $+ 21\,\dot{\mathbb{i}}\,h_2\,x_2\,y_3^4 + 3\,\dot{\mathbb{i}}\,d\gamma\,h_2\,x_2\,y_3^4 - 14\,x_1\,x_3\,y_3^4 - 2\,d\gamma\,x_1\,x_3\,y_3^4 -$
$14\,\dot{\mathbb{i}}\,x_3\,y_1\,y_3^4 - 2\,\dot{\mathbb{i}}\,d\gamma\,x_3\,y_1\,y_3^4 + 126\,\dot{\mathbb{i}}\,y_2\,y_3^4 + 39\,\dot{\mathbb{i}}\,d\gamma\,y_2\,y_3^4 + 3\,\dot{\mathbb{i}}\,d\gamma^2\,y_2\,y_3^4 - 21\,h_1\,y_2\,y_3^4 -$
$3\,d\gamma\,h_1\,y_2\,y_3^4 + 21\,h_2\,y_2\,y_3^4 + 3\,d\gamma\,h_2\,y_2\,y_3^4 - 14\,\dot{\mathbb{i}}\,x_1\,y_3^5 - 2\,\dot{\mathbb{i}}\,d\gamma\,x_1\,y_3^5 + 14\,y_1\,y_3^5 + 2\,d\gamma\,y_1\,y_3^5$

large output   **show less**   **show more**   **show all**   **set size limit…**

Out[ ]= 0

In[ ]:= (* $Y^G{}_{\alpha_1}$ $\pi^{\lambda_1}{}_{1,k}$ *)
k = 5;
$-\left(-\dfrac{1}{2}\left(\ (2\,y_1 - \mathbb{i}\,2\,x_1)\ D[A[\![1,\,k]\!],\,h_1]\ -\ (2\,h_1 - h_2)\ D[A[\![1,\,k]\!],\,y_1]\ +\right.\right.$
$\qquad\mathbb{i}\ (2\,h_1 - h_2)\ D[A[\![1,\,k]\!],\,x_1]\ +\ (x_2 - \mathbb{i}\,y_2)\ D[A[\![1,\,k]\!],\,x_3]\ +\ (y_2 + \mathbb{i}\,x_2)\ D[A[\![1,\,k]\!],\,y_3]\ +$
$\qquad\left.\left.(-x_3 - \mathbb{i}\,y_3)\ D[A[\![1,\,k]\!],\,x_2]\ +\ (-y_3 + \mathbb{i}\,x_3)\ D[A[\![1,\,k]\!],\,y_2]\right)\right)$ // Expand

In[ ]=

$5040\,x_1^2\,x_2 + 3828\,d\gamma\,x_1^2\,x_2 + 1074\,d\gamma^2\,x_1^2\,x_2 + 132\,d\gamma^3\,x_1^2\,x_2 + 6\,d\gamma^4\,x_1^2\,x_2 +$
$252\,h_1^2\,x_1^2\,x_2 + 78\,d\gamma\,h_1^2\,x_1^2\,x_2 + 6\,d\gamma^2\,h_1^2\,x_1^2\,x_2 + 2520\,\mathbb{i}\,h_2\,x_1^2\,x_2 + 1284\,\mathbb{i}\,d\gamma\,h_2\,x_1^2\,x_2 +$
$216\,\mathbb{i}\,d\gamma^2\,h_2\,x_1^2\,x_2 + 12\,\mathbb{i}\,d\gamma^3\,h_2\,x_1^2\,x_2 - 252\,h_1\,h_2\,x_1^2\,x_2 - 78\,d\gamma\,h_1\,h_2\,x_1^2\,x_2 -$
$6\,d\gamma^2\,h_1\,h_2\,x_1^2\,x_2 - 42\,\mathbb{i}\,h_1^2\,h_2\,x_1^2\,x_2 - 6\,\mathbb{i}\,d\gamma\,h_1^2\,h_2\,x_1^2\,x_2 + 252\,h_2^2\,x_1^2\,x_2 + 78\,d\gamma\,h_2^2\,x_1^2\,x_2 +$
$6\,d\gamma^2\,h_2^2\,x_1^2\,x_2 + 42\,\mathbb{i}\,h_1\,h_2^2\,x_1^2\,x_2 + 6\,\mathbb{i}\,d\gamma\,h_1\,h_2^2\,x_1^2\,x_2 + 84\,\mathbb{i}\,h_2^3\,x_1^2\,x_2 + 12\,\mathbb{i}\,d\gamma\,h_2^3\,x_1^2\,x_2 +$
··· 2184 ··· $+ 42\,\mathbb{i}\,h_2\,x_2\,y_3^4 + 6\,\mathbb{i}\,d\gamma\,h_2\,x_2\,y_3^4 - 28\,x_1\,x_3\,y_3^4 - 4\,d\gamma\,x_1\,x_3\,y_3^4 -$
$28\,\mathbb{i}\,x_3\,y_1\,y_3^4 - 4\,\mathbb{i}\,d\gamma\,x_3\,y_1\,y_3^4 + 252\,\mathbb{i}\,y_2\,y_3^4 + 78\,\mathbb{i}\,d\gamma\,y_2\,y_3^4 + 6\,\mathbb{i}\,d\gamma^2\,y_2\,y_3^4 - 42\,h_1\,y_2\,y_3^4 -$
$6\,d\gamma\,h_1\,y_2\,y_3^4 + 42\,h_2\,y_2\,y_3^4 + 6\,d\gamma\,h_2\,y_2\,y_3^4 - 28\,\mathbb{i}\,x_1\,y_3^5 - 4\,\mathbb{i}\,d\gamma\,x_1\,y_3^5 + 28\,y_1\,y_3^5 + 4\,d\gamma\,y_1\,y_3^5$

large output   **show less**   **show more**   **show all**   **set size limit...**

Out[ ]= 0

In[ ]:= (* $Y^G{}_{\alpha_1}$ $\pi^{\lambda_1}{}_{1,k}$ *)
k = 6;
$-\left(-\dfrac{1}{2}\left(\ (2\,y_1 - \mathbb{i}\,2\,x_1)\ D[A[\![1,\,k]\!],\,h_1]\ -\ (2\,h_1 - h_2)\ D[A[\![1,\,k]\!],\,y_1]\ +\right.\right.$
$\qquad\mathbb{i}\ (2\,h_1 - h_2)\ D[A[\![1,\,k]\!],\,x_1]\ +\ (x_2 - \mathbb{i}\,y_2)\ D[A[\![1,\,k]\!],\,x_3]\ +\ (y_2 + \mathbb{i}\,x_2)\ D[A[\![1,\,k]\!],\,y_3]\ +$
$\qquad\left.\left.(-x_3 - \mathbb{i}\,y_3)\ D[A[\![1,\,k]\!],\,x_2]\ +\ (-y_3 + \mathbb{i}\,x_3)\ D[A[\![1,\,k]\!],\,y_2]\right)\right)$ // Expand

In[ ]:= $1260\,x_1^2\,x_2^2 + 642\,d\gamma\,x_1^2\,x_2^2 + 108\,d\gamma^2\,x_1^2\,x_2^2 + 6\,d\gamma^3\,x_1^2\,x_2^2 + 42\,h_1^2\,x_1^2\,x_2^2 + 6\,d\gamma\,h_1^2\,x_1^2\,x_2^2 - 42\,h_1\,h_2\,x_1^2\,x_2^2 -$
$6\,d\gamma\,h_1\,h_2\,x_1^2\,x_2^2 + 42\,h_2^2\,x_1^2\,x_2^2 + 6\,d\gamma\,h_2^2\,x_1^2\,x_2^2 + 42\,x_1^4\,x_2^2 + 6\,d\gamma\,x_1^4\,x_2^2 + 42\,x_1^2\,x_2^4 + 6\,d\gamma\,x_1^2\,x_2^4 +$
$2520\,\mathbb{i}\,h_1\,x_1\,x_2\,x_3 + 1284\,\mathbb{i}\,d\gamma\,h_1\,x_1\,x_2\,x_3 + 216\,\mathbb{i}\,d\gamma^2\,h_1\,x_1\,x_2\,x_3 + 12\,\mathbb{i}\,d\gamma^3\,h_1\,x_1\,x_2\,x_3 +$
$84\,\mathbb{i}\,h_1^3\,x_1\,x_2\,x_3 + 12\,\mathbb{i}\,d\gamma\,h_1^3\,x_1\,x_2\,x_3 - 2520\,\mathbb{i}\,h_2\,x_1\,x_2\,x_3 - 1284\,\mathbb{i}\,d\gamma\,h_2\,x_1\,x_2\,x_3 - 216\,\mathbb{i}\,d\gamma^2\,h_2\,x_1\,x_2\,x_3 -$
$12\,\mathbb{i}\,d\gamma^3\,h_2\,x_1\,x_2\,x_3 - 294\,\mathbb{i}\,h_1^2\,h_2\,x_1\,x_2\,x_3 - 42\,\mathbb{i}\,d\gamma\,h_1^2\,h_2\,x_1\,x_2\,x_3 + 294\,\mathbb{i}\,h_1\,h_2^2\,x_1\,x_2\,x_3 +$
$42\,\mathbb{i}\,d\gamma\,h_1\,h_2^2\,x_1\,x_2\,x_3 - 84\,\mathbb{i}\,h_2^3\,x_1\,x_2\,x_3 - 12\,\mathbb{i}\,d\gamma\,h_2^3\,x_1\,x_2\,x_3 + 84\,\mathbb{i}\,h_1\,x_1^3\,x_2\,x_3 + 12\,\mathbb{i}\,d\gamma\,h_1\,x_1^3\,x_2\,x_3 -$
$210\,\mathbb{i}\,h_2\,x_1^3\,x_2\,x_3 - 30\,\mathbb{i}\,d\gamma\,h_2\,x_1^3\,x_2\,x_3 + 210\,\mathbb{i}\,h_1\,x_1\,x_2^3\,x_3 + 30\,\mathbb{i}\,d\gamma\,h_1\,x_1\,x_2^3\,x_3 - 84\,\mathbb{i}\,h_2\,x_1\,x_2^3\,x_3 -$
$12\,\mathbb{i}\,d\gamma\,h_2\,x_1\,x_2^3\,x_3 - 5040\,x_3^2 - 5508\,d\gamma\,x_3^2 - 2350\,d\gamma^2\,x_3^2 - 490\,d\gamma^3\,x_3^2 - 50\,d\gamma^4\,x_3^2 - 2\,d\gamma^5\,x_3^2 -$
$2100\,h_1^2\,x_3^2 - 1070\,d\gamma\,h_1^2\,x_3^2 - 180\,d\gamma^2\,h_1^2\,x_3^2 - 10\,d\gamma^3\,h_1^2\,x_3^2 - 56\,h_1^4\,x_3^2 - 8\,d\gamma\,h_1^4\,x_3^2 + 3360\,h_1\,h_2\,x_3^2 +$
$1712\,d\gamma\,h_1\,h_2\,x_3^2 + 288\,d\gamma^2\,h_1\,h_2\,x_3^2 + 16\,d\gamma^3\,h_1\,h_2\,x_3^2 + 280\,h_1^3\,h_2\,x_3^2 + 40\,d\gamma\,h_1^3\,h_2\,x_3^2 - 2100\,h_2^2\,x_3^2 -$
$1070\,d\gamma\,h_2^2\,x_3^2 - 180\,d\gamma^2\,h_2^2\,x_3^2 - 10\,d\gamma^3\,h_2^2\,x_3^2 - 462\,h_1^2\,h_2^2\,x_3^2 - 66\,d\gamma\,h_1^2\,h_2^2\,x_3^2 + 280\,h_1\,h_2^3\,x_3^2 +$
$40\,d\gamma\,h_1\,h_2^3\,x_3^2 - 56\,h_2^4\,x_3^2 - 8\,d\gamma\,h_2^4\,x_3^2 - 840\,x_1^2\,x_3^2 - 428\,d\gamma\,x_1^2\,x_3^2 - 72\,d\gamma^2\,x_1^2\,x_3^2 - 4\,d\gamma^3\,x_1^2\,x_3^2 -$
$70\,h_1^2\,x_1^2\,x_3^2 - 10\,d\gamma\,h_1^2\,x_1^2\,x_3^2 + 238\,h_1\,h_2\,x_1^2\,x_3^2 + 34\,d\gamma\,h_1\,h_2\,x_1^2\,x_3^2 - 196\,h_2^2\,x_1^2\,x_3^2 - 28\,d\gamma\,h_2^2\,x_1^2\,x_3^2 -$
$14\,x_1^4\,x_3^2 - 2\,d\gamma\,x_1^4\,x_3^2 - 840\,x_2^2\,x_3^2 - 428\,d\gamma\,x_2^2\,x_3^2 - 72\,d\gamma^2\,x_2^2\,x_3^2 - 4\,d\gamma^3\,x_2^2\,x_3^2 - 196\,h_1^2\,x_2^2\,x_3^2 -$
$28\,d\gamma\,h_1^2\,x_2^2\,x_3^2 + 238\,h_1\,h_2\,x_2^2\,x_3^2 + 34\,d\gamma\,h_1\,h_2\,x_2^2\,x_3^2 - 70\,h_2^2\,x_2^2\,x_3^2 - 10\,d\gamma\,h_2^2\,x_2^2\,x_3^2 + 14\,x_1^2\,x_2^2\,x_3^2 +$
$2\,d\gamma\,x_1^2\,x_2^2\,x_3^2 - 14\,x_2^4\,x_3^2 - 2\,d\gamma\,x_2^4\,x_3^2 - 42\,\mathbb{i}\,h_1\,x_1\,x_2\,x_3^3 - 6\,\mathbb{i}\,d\gamma\,h_1\,x_1\,x_2\,x_3^3 + 42\,\mathbb{i}\,h_2\,x_1\,x_2\,x_3^3 +$
$6\,\mathbb{i}\,d\gamma\,h_2\,x_1\,x_2\,x_3^3 - 840\,x_3^4 - 428\,d\gamma\,x_3^4 - 72\,d\gamma^2\,x_3^4 - 4\,d\gamma^3\,x_3^4 + 56\,h_1^2\,x_3^4 + 8\,d\gamma\,h_1^2\,x_3^4 - 140\,h_1\,h_2\,x_3^4 -$
$20\,d\gamma\,h_1\,h_2\,x_3^4 + 56\,h_2^2\,x_3^4 + 8\,d\gamma\,h_2^2\,x_3^4 - 28\,x_1^2\,x_3^4 - 4\,d\gamma\,x_1^2\,x_3^4 - 28\,x_2^2\,x_3^4 - 4\,d\gamma\,x_2^2\,x_3^4 - 14\,x_3^6 -$

$$2 \, d\gamma \, x_3^6 + 2520 \, \dot{\imath} \, x_1 \, x_2^2 \, y_1 + 1284 \, \dot{\imath} \, d\gamma \, x_1 \, x_2^2 \, y_1 + 216 \, \dot{\imath} \, d\gamma^2 \, x_1 \, x_2^2 \, y_1 + 12 \, \dot{\imath} \, d\gamma^3 \, x_1 \, x_2^2 \, y_1 +$$

$$84 \, \dot{\imath} \, h_1^2 \, x_1 \, x_2^2 \, y_1 + 12 \, \dot{\imath} \, d\gamma \, h_1^2 \, x_1 \, x_2^2 \, y_1 - 84 \, \dot{\imath} \, h_1 \, h_2 \, x_1 \, x_2^2 \, y_1 - 12 \, \dot{\imath} \, d\gamma \, h_1 \, h_2 \, x_1 \, x_2^2 \, y_1 + 84 \, \dot{\imath} \, h_2^2 \, x_1 \, x_2^2 \, y_1 +$$

$$12 \, \dot{\imath} \, d\gamma \, h_2^2 \, x_1 \, x_2^2 \, y_1 + 84 \, \dot{\imath} \, x_1^3 \, x_2^2 \, y_1 + 12 \, \dot{\imath} \, d\gamma \, x_1^3 \, x_2^2 \, y_1 + 84 \, \dot{\imath} \, x_1 \, x_2^4 \, y_1 + 12 \, \dot{\imath} \, d\gamma \, x_1 \, x_2^4 \, y_1 -$$

$$2520 \, h_1 \, x_2 \, x_3 \, y_1 - 1284 \, d\gamma \, h_1 \, x_2 \, x_3 \, y_1 - 216 \, d\gamma^2 \, h_1 \, x_2 \, x_3 \, y_1 - 12 \, d\gamma^3 \, h_1 \, x_2 \, x_3 \, y_1 - 84 \, h_1^3 \, x_2 \, x_3 \, y_1 -$$

$$12 \, d\gamma \, h_1^3 \, x_2 \, x_3 \, y_1 + 2520 \, h_2 \, x_2 \, x_3 \, y_1 + 1284 \, d\gamma \, h_2 \, x_2 \, x_3 \, y_1 + 216 \, d\gamma^2 \, h_2 \, x_2 \, x_3 \, y_1 + 12 \, d\gamma^3 \, h_2 \, x_2 \, x_3 \, y_1 +$$

$$294 \, h_1^2 \, h_2 \, x_2 \, x_3 \, y_1 + 42 \, d\gamma \, h_1^2 \, h_2 \, x_2 \, x_3 \, y_1 - 294 \, h_1 \, h_2^2 \, x_2 \, x_3 \, y_1 - 42 \, d\gamma \, h_1 \, h_2^2 \, x_2 \, x_3 \, y_1 + 84 \, h_2^3 \, x_2 \, x_3 \, y_1 +$$

$$12 \, d\gamma \, h_2^3 \, x_2 \, x_3 \, y_1 - 84 \, h_1 \, x_1^2 \, x_2 \, x_3 \, y_1 - 12 \, d\gamma \, h_1 \, x_1^2 \, x_2 \, x_3 \, y_1 + 210 \, h_2 \, x_1^2 \, x_2 \, x_3 \, y_1 + 30 \, d\gamma \, h_2 \, x_1^2 \, x_2 \, x_3 \, y_1 -$$

$$210 \, h_1 \, x_2^3 \, x_3 \, y_1 - 30 \, d\gamma \, h_1 \, x_2^3 \, x_3 \, y_1 + 84 \, h_2 \, x_2^3 \, x_3 \, y_1 + 12 \, d\gamma \, h_2 \, x_2^3 \, x_3 \, y_1 - 168 \, \dot{\imath} \, x_1 \, x_2^2 \, x_3^3 \, y_1 -$$

$$24 \, \dot{\imath} \, d\gamma \, x_1 \, x_2^2 \, x_3^3 \, y_1 + 294 \, h_1 \, x_2 \, x_3^3 \, y_1 + 42 \, d\gamma \, h_1 \, x_2 \, x_3^3 \, y_1 - 294 \, h_2 \, x_2 \, x_3^3 \, y_1 - 42 \, d\gamma \, h_2 \, x_2 \, x_3^3 \, y_1 -$$

$$1260 \, x_2^2 \, y_1^2 - 642 \, d\gamma \, x_2^2 \, y_1^2 - 108 \, d\gamma^2 \, x_2^2 \, y_1^2 - 6 \, d\gamma^3 \, x_2^2 \, y_1^2 - 42 \, h_1^2 \, x_2^2 \, y_1^2 - 6 \, d\gamma \, h_1^2 \, x_2^2 \, y_1^2 + 42 \, h_1 \, h_2 \, x_2^2 \, y_1^2 +$$

$$6 \, d\gamma \, h_1 \, h_2 \, x_2^2 \, y_1^2 - 42 \, h_2^2 \, x_2^2 \, y_1^2 - 6 \, d\gamma \, h_2^2 \, x_2^2 \, y_1^2 - 42 \, x_1^4 \, y_1^2 - 6 \, d\gamma \, x_1^4 \, y_1^2 + 84 \, \dot{\imath} \, h_1 \, x_1 \, x_2 \, x_3 \, y_1^2 +$$

$$12 \, \dot{\imath} \, d\gamma \, h_1 \, x_1 \, x_2 \, x_3 \, y_1^2 - 210 \, \dot{\imath} \, h_2 \, x_1 \, x_2 \, x_3 \, y_1^2 - 30 \, \dot{\imath} \, d\gamma \, h_2 \, x_1 \, x_2 \, x_3 \, y_1^2 - 840 \, x_3^2 \, y_1^2 - 428 \, d\gamma \, x_3^2 \, y_1^2 -$$

$$72 \, d\gamma^2 \, x_3^2 \, y_1^2 - 4 \, d\gamma^3 \, x_3^2 \, y_1^2 - 70 \, h_1^2 \, x_3^2 \, y_1^2 - 10 \, d\gamma \, h_1^2 \, x_3^2 \, y_1^2 + 238 \, h_1 \, h_2 \, x_3^2 \, y_1^2 + 34 \, d\gamma \, h_1 \, h_2 \, x_3^2 \, y_1^2 -$$

$$196 \, h_2^2 \, x_3^2 \, y_1^2 - 28 \, d\gamma \, h_2^2 \, x_3^2 \, y_1^2 - 28 \, x_1^2 \, x_3^2 \, y_1^2 - 4 \, d\gamma \, x_1^2 \, x_3^2 \, y_1^2 + 182 \, x_2^2 \, x_3^2 \, y_1^2 + 26 \, d\gamma \, x_2^2 \, x_3^2 \, y_1^2 - 28 \, x_3^4 \, y_1^2 -$$

$$4 \, d\gamma \, x_3^4 \, y_1^2 + 84 \, \dot{\imath} \, x_1 \, x_2^2 \, y_1^3 + 12 \, \dot{\imath} \, d\gamma \, x_1 \, x_2^2 \, y_1^3 - 84 \, h_1 \, x_2 \, x_3 \, y_1^3 - 12 \, d\gamma \, h_1 \, x_2 \, x_3 \, y_1^3 + 210 \, h_2 \, x_2 \, x_3 \, y_1^3 +$$

$$30 \, d\gamma \, h_2 \, x_2 \, x_3 \, y_1^3 - 42 \, x_2^2 \, y_1^4 - 6 \, d\gamma \, x_2^2 \, y_1^4 - 14 \, x_3^2 \, y_1^4 - 2 \, d\gamma \, x_3^2 \, y_1^4 + 2520 \, \dot{\imath} \, x_1^2 \, x_2 \, y_2 + 1284 \, \dot{\imath} \, d\gamma \, x_1^2 \, x_2 \, y_2 +$$

$$216 \, \dot{\imath} \, d\gamma^2 \, x_1^2 \, x_2 \, y_2 + 12 \, \dot{\imath} \, d\gamma^3 \, x_1^2 \, x_2 \, y_2 + 84 \, \dot{\imath} \, h_1^2 \, x_1^2 \, x_2 \, y_2 + 12 \, \dot{\imath} \, d\gamma \, h_1^2 \, x_1^2 \, x_2 \, y_2 - 84 \, \dot{\imath} \, h_1 \, h_2 \, x_1^2 \, x_2 \, y_2 -$$

$$12 \, \dot{\imath} \, d\gamma \, h_1 \, h_2 \, x_1^2 \, x_2 \, y_2 + 84 \, \dot{\imath} \, h_2^2 \, x_1^2 \, x_2 \, y_2 + 12 \, \dot{\imath} \, d\gamma \, h_2^2 \, x_1^2 \, x_2 \, y_2 + 84 \, \dot{\imath} \, x_1^4 \, x_2 \, y_2 + 12 \, \dot{\imath} \, d\gamma \, x_1^4 \, x_2 \, y_2 +$$

$$84 \, \dot{\imath} \, x_1^2 \, x_2^3 \, y_2 + 12 \, \dot{\imath} \, d\gamma \, x_1^2 \, x_2^3 \, y_2 - 2520 \, h_1 \, x_1 \, x_3 \, y_2 - 1284 \, d\gamma \, h_1 \, x_1 \, x_3 \, y_2 - 216 \, d\gamma^2 \, h_1 \, x_1 \, x_3 \, y_2 -$$

$$12 \, d\gamma^3 \, h_1 \, x_1 \, x_3 \, y_2 - 84 \, h_1^3 \, x_1 \, x_3 \, y_2 - 12 \, d\gamma \, h_1^3 \, x_1 \, x_3 \, y_2 + 2520 \, h_2 \, x_1 \, x_3 \, y_2 + 1284 \, d\gamma \, h_2 \, x_1 \, x_3 \, y_2 +$$

$$216 \, d\gamma^2 \, h_2 \, x_1 \, x_3 \, y_2 + 12 \, d\gamma^3 \, h_2 \, x_1 \, x_3 \, y_2 + 294 \, h_1^2 \, h_2 \, x_1 \, x_3 \, y_2 + 42 \, d\gamma \, h_1^2 \, h_2 \, x_1 \, x_3 \, y_2 - 294 \, h_1 \, h_2^2 \, x_1 \, x_3 \, y_2 -$$

$$42 \, d\gamma \, h_1 \, h_2^2 \, x_1 \, x_3 \, y_2 + 84 \, h_2^3 \, x_1 \, x_3 \, y_2 + 12 \, d\gamma \, h_2^3 \, x_1 \, x_3 \, y_2 - 84 \, h_1 \, x_1^3 \, x_3 \, y_2 - 12 \, d\gamma \, h_1 \, x_1^3 \, x_3 \, y_2 +$$

$$210 \, h_2 \, x_1^3 \, x_3 \, y_2 + 30 \, d\gamma \, h_2 \, x_1^3 \, x_3 \, y_2 - 210 \, h_1 \, x_1 \, x_2^2 \, x_3 \, y_2 - 30 \, d\gamma \, h_1 \, x_1 \, x_2^2 \, x_3 \, y_2 + 84 \, h_2 \, x_1 \, x_2^2 \, x_3 \, y_2 +$$

$$12 \, d\gamma \, h_2 \, x_1 \, x_2^2 \, x_3 \, y_2 - 168 \, \dot{\imath} \, x_1^2 \, x_2 \, x_3^3 \, y_2 - 24 \, \dot{\imath} \, d\gamma \, x_1^2 \, x_2 \, x_3^3 \, y_2 + 294 \, h_1 \, x_1 \, x_3^3 \, y_2 + 42 \, d\gamma \, h_1 \, x_1 \, x_3^3 \, y_2 -$$

$$294 \, h_2 \, x_1 \, x_3^3 \, y_2 - 42 \, d\gamma \, h_2 \, x_1 \, x_3^3 \, y_2 - 5040 \, x_1 \, x_2 \, y_1 \, y_2 - 2568 \, d\gamma \, x_1 \, x_2 \, y_1 \, y_2 - 432 \, d\gamma^2 \, x_1 \, x_2 \, y_1 \, y_2 -$$

$$24 \, d\gamma^3 \, x_1 \, x_2 \, y_1 \, y_2 - 168 \, h_1^2 \, x_1 \, x_2 \, y_1 \, y_2 - 24 \, d\gamma \, h_1^2 \, x_1 \, x_2 \, y_1 \, y_2 + 168 \, h_1 \, h_2 \, x_1 \, x_2 \, y_1 \, y_2 +$$

$$24 \, d\gamma \, h_1 \, h_2 \, x_1 \, x_2 \, y_1 \, y_2 - 168 \, h_2^2 \, x_1 \, x_2 \, y_1 \, y_2 - 24 \, d\gamma \, h_2^2 \, x_1 \, x_2 \, y_1 \, y_2 - 168 \, x_1^3 \, x_2 \, y_1 \, y_2 - 24 \, d\gamma \, x_1^3 \, x_2 \, y_1 \, y_2 -$$

$$168 \, x_1 \, x_2^3 \, y_1 \, y_2 - 24 \, d\gamma \, x_1 \, x_2^3 \, y_1 \, y_2 - 2520 \, \dot{\imath} \, h_1 \, x_3 \, y_1 \, y_2 - 1284 \, \dot{\imath} \, d\gamma \, h_1 \, x_3 \, y_1 \, y_2 - 216 \, \dot{\imath} \, d\gamma^2 \, h_1 \, x_3 \, y_1 \, y_2 -$$

$$12 \, \dot{\imath} \, d\gamma^3 \, h_1 \, x_3 \, y_1 \, y_2 - 84 \, \dot{\imath} \, h_1^3 \, x_3 \, y_1 \, y_2 - 12 \, \dot{\imath} \, d\gamma \, h_1^3 \, x_3 \, y_1 \, y_2 + 2520 \, \dot{\imath} \, h_2 \, x_3 \, y_1 \, y_2 + 1284 \, \dot{\imath} \, d\gamma \, h_2 \, x_3 \, y_1 \, y_2 +$$

$$216 \, \dot{\imath} \, d\gamma^2 \, h_2 \, x_3 \, y_1 \, y_2 + 12 \, \dot{\imath} \, d\gamma^3 \, h_2 \, x_3 \, y_1 \, y_2 + 294 \, \dot{\imath} \, h_1^2 \, h_2 \, x_3 \, y_1 \, y_2 + 42 \, \dot{\imath} \, d\gamma \, h_1^2 \, h_2 \, x_3 \, y_1 \, y_2 -$$

$$294 \, \dot{\imath} \, h_1 \, h_2^2 \, x_3 \, y_1 \, y_2 - 42 \, \dot{\imath} \, d\gamma \, h_1 \, h_2^2 \, x_3 \, y_1 \, y_2 + 84 \, \dot{\imath} \, h_2^3 \, x_3 \, y_1 \, y_2 + 12 \, \dot{\imath} \, d\gamma \, h_2^3 \, x_3 \, y_1 \, y_2 -$$

$$84 \, \dot{\imath} \, h_1 \, x_1^2 \, x_3 \, y_1 \, y_2 - 12 \, \dot{\imath} \, d\gamma \, h_1 \, x_1^2 \, x_3 \, y_1 \, y_2 + 210 \, \dot{\imath} \, h_2 \, x_1^2 \, x_3 \, y_1 \, y_2 + 30 \, \dot{\imath} \, d\gamma \, h_2 \, x_1^2 \, x_3 \, y_1 \, y_2 -$$

$$210 \, \dot{\imath} \, h_1 \, x_2^2 \, x_3 \, y_1 \, y_2 - 30 \, \dot{\imath} \, d\gamma \, h_1 \, x_2^2 \, x_3 \, y_1 \, y_2 + 84 \, \dot{\imath} \, h_2 \, x_2^2 \, x_3 \, y_1 \, y_2 + 12 \, \dot{\imath} \, d\gamma \, h_2 \, x_2^2 \, x_3 \, y_1 \, y_2 +$$

$$336 \, x_1 \, x_2 \, x_3^3 \, y_1 \, y_2 + 48 \, d\gamma \, x_1 \, x_2 \, x_3^3 \, y_1 \, y_2 + 42 \, \dot{\imath} \, h_1 \, x_3^3 \, y_1 \, y_2 + 6 \, \dot{\imath} \, d\gamma \, h_1 \, x_3^3 \, y_1 \, y_2 - 42 \, \dot{\imath} \, h_2 \, x_3^3 \, y_1 \, y_2 -$$

$$6 \, \dot{\imath} \, d\gamma \, h_2 \, x_3^3 \, y_1 \, y_2 - 2520 \, \dot{\imath} \, x_2 \, y_1^2 \, y_2 - 1284 \, \dot{\imath} \, d\gamma \, x_2 \, y_1^2 \, y_2 - 216 \, \dot{\imath} \, d\gamma^2 \, x_2 \, y_1^2 \, y_2 - 12 \, \dot{\imath} \, d\gamma^3 \, x_2 \, y_1^2 \, y_2 -$$

$$84 \, \dot{\imath} \, h_1^2 \, x_2 \, y_1^2 \, y_2 - 12 \, \dot{\imath} \, d\gamma \, h_1^2 \, x_2 \, y_1^2 \, y_2 + 84 \, \dot{\imath} \, h_1 \, h_2 \, x_2 \, y_1^2 \, y_2 + 12 \, \dot{\imath} \, d\gamma \, h_1 \, h_2 \, x_2 \, y_1^2 \, y_2 - 84 \, \dot{\imath} \, h_2^2 \, x_2 \, y_1^2 \, y_2 -$$

$$12 \, \dot{\imath} \, d\gamma \, h_2^2 \, x_2 \, y_1^2 \, y_2 - 84 \, \dot{\imath} \, x_1^3 \, y_1^2 \, y_2 - 12 \, \dot{\imath} \, d\gamma \, x_1^3 \, y_1^2 \, y_2 - 84 \, h_1 \, x_1 \, x_3 \, y_1^2 \, y_2 - 12 \, d\gamma \, h_1 \, x_1 \, x_3 \, y_1^2 \, y_2 +$$

$$210 \, h_2 \, x_1 \, x_3 \, y_1^2 \, y_2 + 30 \, d\gamma \, h_2 \, x_1 \, x_3 \, y_1^2 \, y_2 + 168 \, \dot{\imath} \, x_2 \, x_3^2 \, y_1^2 \, y_2 + 24 \, \dot{\imath} \, d\gamma \, x_2 \, x_3^2 \, y_1^2 \, y_2 - 168 \, x_1 \, x_2 \, y_1^3 \, y_2 -$$

$$24 \, d\gamma \, x_1 \, x_2 \, y_1^3 \, y_2 - 84 \, \dot{\imath} \, h_1 \, x_3 \, y_1^3 \, y_2 - 12 \, \dot{\imath} \, d\gamma \, h_1 \, x_3 \, y_1^3 \, y_2 + 210 \, \dot{\imath} \, h_2 \, x_3 \, y_1^3 \, y_2 + 30 \, \dot{\imath} \, d\gamma \, h_2 \, x_3 \, y_1^3 \, y_2 -$$

$$84 \, \dot{\imath} \, x_2 \, y_1^4 \, y_2 - 12 \, \dot{\imath} \, d\gamma \, x_2 \, y_1^4 \, y_2 - 1260 \, x_1^2 \, y_2^2 - 642 \, d\gamma \, x_1^2 \, y_2^2 - 108 \, d\gamma^2 \, x_1^2 \, y_2^2 - 6 \, d\gamma^3 \, x_1^2 \, y_2^2 -$$

$$42 \, h_1^2 \, x_1^2 \, y_2^2 - 6 \, d\gamma \, h_1^2 \, x_1^2 \, y_2^2 + 42 \, h_1 \, h_2 \, x_1^2 \, y_2^2 + 6 \, d\gamma \, h_1 \, h_2 \, x_1^2 \, y_2^2 - 42 \, h_2^2 \, x_1^2 \, y_2^2 - 6 \, d\gamma \, h_2^2 \, x_1^2 \, y_2^2 -$$

$$42 \, x_1^4 \, y_2^2 - 6 \, d\gamma \, x_1^4 \, y_2^2 + 210 \, \dot{\imath} \, h_1 \, x_1 \, x_2 \, x_3 \, y_2^2 + 30 \, \dot{\imath} \, d\gamma \, h_1 \, x_1 \, x_2 \, x_3 \, y_2^2 - 84 \, \dot{\imath} \, h_2 \, x_1 \, x_2 \, x_3 \, y_2^2 -$$

$$12 \, \dot{\imath} \, d\gamma \, h_2 \, x_1 \, x_2 \, x_3 \, y_2^2 - 840 \, x_3^2 \, y_2^2 - 428 \, d\gamma \, x_3^2 \, y_2^2 - 72 \, d\gamma^2 \, x_3^2 \, y_2^2 - 4 \, d\gamma^3 \, x_3^2 \, y_2^2 - 196 \, h_1^2 \, x_3^2 \, y_2^2 -$$

$$28 \, d\gamma \, h_1^2 \, x_3^2 \, y_2^2 + 238 \, h_1 \, h_2 \, x_3^2 \, y_2^2 + 34 \, d\gamma \, h_1 \, h_2 \, x_3^2 \, y_2^2 - 70 \, h_2^2 \, x_3^2 \, y_2^2 - 10 \, d\gamma \, h_2^2 \, x_3^2 \, y_2^2 + 182 \, x_1^2 \, x_3^2 \, y_2^2 +$$

$$26 \, d\gamma \, x_1^2 \, x_3^2 \, y_2^2 - 28 \, x_2^2 \, x_3^2 \, y_2^2 - 4 \, d\gamma \, x_2^2 \, x_3^2 \, y_2^2 - 28 \, x_3^4 \, y_2^2 - 4 \, d\gamma \, x_3^4 \, y_2^2 - 2520 \, \dot{\imath} \, x_1 \, y_1 \, y_2^2 -$$

$$1284 \, \dot{\imath} \, d\gamma \, x_1 \, y_1 \, y_2^2 - 216 \, \dot{\imath} \, d\gamma^2 \, x_1 \, y_1 \, y_2^2 - 12 \, \dot{\imath} \, d\gamma^3 \, x_1 \, y_1 \, y_2^2 - 84 \, \dot{\imath} \, h_1^2 \, x_1 \, y_1 \, y_2^2 - 12 \, \dot{\imath} \, d\gamma \, h_1^2 \, x_1 \, y_1 \, y_2^2 +$$

$$84 \, \dot{\imath} \, h_1 \, h_2 \, x_1 \, y_1 \, y_2^2 + 12 \, \dot{\imath} \, d\gamma \, h_1 \, h_2 \, x_1 \, y_1 \, y_2^2 - 84 \, \dot{\imath} \, h_2^2 \, x_1 \, y_1 \, y_2^2 - 12 \, \dot{\imath} \, d\gamma \, h_2^2 \, x_1 \, y_1 \, y_2^2 - 84 \, \dot{\imath} \, x_1^3 \, y_1 \, y_2^2 -$$

$$12\,i\,d\gamma\,x_1^3\,y_1\,y_2^2 - 210\,h_1\,x_2\,x_3\,y_1\,y_2^2 - 30\,d\gamma\,h_1\,x_2\,x_3\,y_1\,y_2^2 + 84\,h_2\,x_2\,x_3\,y_1\,y_2^2 + 12\,d\gamma\,h_2\,x_2\,x_3\,y_1\,y_2^2 +$$

$$168\,i\,x_1\,x_3^2\,y_1\,y_2^2 + 24\,i\,d\gamma\,x_1\,x_3^2\,y_1\,y_2^2 + 1260\,y_1^2\,y_2^2 + 642\,d\gamma\,y_1^2\,y_2^2 + 108\,d\gamma^2\,y_1^2\,y_2^2 + 6\,d\gamma^3\,y_1^2\,y_2^2 +$$

$$42\,h_1^2\,y_1^2\,y_2^2 + 6\,d\gamma\,h_1^2\,y_1^2\,y_2^2 - 42\,h_1\,h_2\,y_1^2\,y_2^2 - 6\,d\gamma\,h_1\,h_2\,y_1^2\,y_2^2 + 42\,h_2^2\,y_1^2\,y_2^2 + 6\,d\gamma\,h_2^2\,y_1^2\,y_2^2 +$$

$$14\,x_3^2\,y_1^2\,y_2^2 + 2\,d\gamma\,x_3^2\,y_1^2\,y_2^2 - 84\,i\,x_1\,y_1^3\,y_2^2 - 12\,i\,d\gamma\,x_1\,y_1^3\,y_2^2 + 42\,y_1^4\,y_2^2 + 6\,d\gamma\,y_1^4\,y_2^2 + 84\,i\,x_1^2\,x_2\,y_2^3 +$$

$$12\,i\,d\gamma\,x_1^2\,x_2\,y_2^3 - 210\,h_1\,x_1\,x_3\,y_2^3 - 30\,d\gamma\,h_1\,x_1\,x_3\,y_2^3 + 84\,h_2\,x_1\,x_3\,y_2^3 + 12\,d\gamma\,h_2\,x_1\,x_3\,y_2^3 -$$

$$168\,x_1\,x_2\,y_1\,y_2^3 - 24\,d\gamma\,x_1\,x_2\,y_1\,y_2^3 - 210\,i\,h_1\,x_3\,y_1\,y_2^3 - 30\,i\,d\gamma\,h_1\,x_3\,y_1\,y_2^3 + 84\,i\,h_2\,x_3\,y_1\,y_2^3 +$$

$$12\,i\,d\gamma\,h_2\,x_3\,y_1\,y_2^3 - 84\,i\,x_2\,y_1^2\,y_2^3 - 12\,i\,d\gamma\,x_2\,y_1^2\,y_2^3 - 42\,x_1^2\,y_2^4 - 6\,d\gamma\,x_1^2\,y_2^4 - 14\,x_3^2\,y_2^4 - 2\,d\gamma\,x_3^2\,y_2^4 -$$

$$84\,i\,x_1\,y_1\,y_2^4 - 12\,i\,d\gamma\,x_1\,y_1\,y_2^4 + 42\,y_1^2\,y_2^4 + 6\,d\gamma\,y_1^2\,y_2^4 - 2520\,h_1\,x_1\,x_2\,y_3 - 1284\,d\gamma\,h_1\,x_1\,x_2\,y_3 -$$

$$216\,d\gamma^2\,h_1\,x_1\,x_2\,y_3 - 12\,d\gamma^3\,h_1\,x_1\,x_2\,y_3 - 84\,h_1^3\,x_1\,x_2\,y_3 - 12\,d\gamma\,h_1^3\,x_1\,x_2\,y_3 + 2520\,h_2\,x_1\,x_2\,y_3 +$$

$$1284\,d\gamma\,h_2\,x_1\,x_2\,y_3 + 216\,d\gamma^2\,h_2\,x_1\,x_2\,y_3 + 12\,d\gamma^3\,h_2\,x_1\,x_2\,y_3 + 294\,h_1^2\,h_2\,x_1\,x_2\,y_3 + 42\,d\gamma\,h_1^2\,h_2\,x_1\,x_2\,y_3 -$$

$$294\,h_1\,h_2^2\,x_1\,x_2\,y_3 - 42\,d\gamma\,h_1\,h_2^2\,x_1\,x_2\,y_3 + 84\,h_2^3\,x_1\,x_2\,y_3 + 12\,d\gamma\,h_2^3\,x_1\,x_2\,y_3 - 84\,h_1\,x_1^3\,x_2\,y_3 -$$

$$12\,d\gamma\,h_1\,x_1^3\,x_2\,y_3 + 210\,h_2\,x_1^3\,x_2\,y_3 + 30\,d\gamma\,h_2\,x_1^3\,x_2\,y_3 - 210\,h_1\,x_1\,x_2^3\,y_3 - 30\,d\gamma\,h_1\,x_1\,x_2^3\,y_3 +$$

$$84\,h_2\,x_1\,x_2^3\,y_3 + 12\,d\gamma\,h_2\,x_1\,x_2^3\,y_3 - 10\,080\,i\,x_3\,y_3 - 11\,016\,i\,d\gamma\,x_3\,y_3 - 4700\,i\,d\gamma^2\,x_3\,y_3 -$$

$$980\,i\,d\gamma^3\,x_3\,y_3 - 100\,i\,d\gamma^4\,x_3\,y_3 - 4\,i\,d\gamma^5\,x_3\,y_3 - 4200\,i\,h_1^2\,x_3\,y_3 - 2140\,i\,d\gamma\,h_1^2\,x_3\,y_3 -$$

$$360\,i\,d\gamma^2\,h_1^2\,x_3\,y_3 - 20\,i\,d\gamma^3\,h_1^2\,x_3\,y_3 - 112\,i\,h_1^4\,x_3\,y_3 - 16\,i\,d\gamma\,h_1^4\,x_3\,y_3 + 6720\,i\,h_1\,h_2\,x_3\,y_3 +$$

$$3424\,i\,d\gamma\,h_1\,h_2\,x_3\,y_3 + 576\,i\,d\gamma^2\,h_1\,h_2\,x_3\,y_3 + 32\,i\,d\gamma^3\,h_1\,h_2\,x_3\,y_3 + 560\,i\,h_1^3\,h_2\,x_3\,y_3 +$$

$$80\,i\,d\gamma\,h_1^3\,h_2\,x_3\,y_3 - 4200\,i\,h_2^2\,x_3\,y_3 - 2140\,i\,d\gamma\,h_2^2\,x_3\,y_3 - 360\,i\,d\gamma^2\,h_2^2\,x_3\,y_3 - 20\,i\,d\gamma^3\,h_2^2\,x_3\,y_3 -$$

$$924\,i\,h_1^2\,h_2^2\,x_3\,y_3 - 132\,i\,d\gamma\,h_1^2\,h_2^2\,x_3\,y_3 + 560\,i\,h_1\,h_2^3\,x_3\,y_3 + 80\,i\,d\gamma\,h_1\,h_2^3\,x_3\,y_3 - 112\,i\,h_2^4\,x_3\,y_3 -$$

$$16\,i\,d\gamma\,h_2^4\,x_3\,y_3 - 1680\,i\,x_1^2\,x_3\,y_3 - 856\,i\,d\gamma\,x_1^2\,x_3\,y_3 - 144\,i\,d\gamma^2\,x_1^2\,x_3\,y_3 - 8\,i\,d\gamma^3\,x_1^2\,x_3\,y_3 -$$

$$140\,i\,h_1^2\,x_1^2\,x_3\,y_3 - 20\,i\,d\gamma\,h_1^2\,x_1^2\,x_3\,y_3 + 476\,i\,h_1\,h_2\,x_1^2\,x_3\,y_3 + 68\,i\,d\gamma\,h_1\,h_2\,x_1^2\,x_3\,y_3 -$$

$$392\,i\,h_2^2\,x_1^2\,x_3\,y_3 - 56\,i\,d\gamma\,h_2^2\,x_1^2\,x_3\,y_3 - 28\,i\,x_1^4\,x_3\,y_3 - 4\,i\,d\gamma\,x_1^4\,x_3\,y_3 - 1680\,i\,x_2^2\,x_3\,y_3 -$$

$$856\,i\,d\gamma\,x_2^2\,x_3\,y_3 - 144\,i\,d\gamma^2\,x_2^2\,x_3\,y_3 - 8\,i\,d\gamma^3\,x_2^2\,x_3\,y_3 - 392\,i\,h_1^2\,x_2^2\,x_3\,y_3 - 56\,i\,d\gamma\,h_1^2\,x_2^2\,x_3\,y_3 +$$

$$476\,i\,h_1\,h_2\,x_2^2\,x_3\,y_3 + 68\,i\,d\gamma\,h_1\,h_2\,x_2^2\,x_3\,y_3 - 140\,i\,h_2^2\,x_2^2\,x_3\,y_3 - 20\,i\,d\gamma\,h_2^2\,x_2^2\,x_3\,y_3 + 196\,i\,x_1^2\,x_2^2\,x_3\,y_3 +$$

$$28\,i\,d\gamma\,x_1^2\,x_2^2\,x_3\,y_3 - 28\,i\,x_2^4\,x_3\,y_3 - 4\,i\,d\gamma\,x_2^4\,x_3\,y_3 - 210\,h_1\,x_1\,x_2\,x_3^2\,y_3 - 30\,d\gamma\,h_1\,x_1\,x_2\,x_3^2\,y_3 +$$

$$210\,h_2\,x_1\,x_2\,x_3^2\,y_3 + 30\,d\gamma\,h_2\,x_1\,x_2\,x_3^2\,y_3 - 1680\,i\,x_3^3\,y_3 - 856\,i\,d\gamma\,x_3^3\,y_3 - 144\,i\,d\gamma^2\,x_3^3\,y_3 -$$

$$8\,i\,d\gamma^3\,x_3^3\,y_3 + 112\,i\,h_1^2\,x_3^3\,y_3 + 16\,i\,d\gamma\,h_1^2\,x_3^3\,y_3 - 280\,i\,h_1\,h_2\,x_3^3\,y_3 - 40\,i\,d\gamma\,h_1\,h_2\,x_3^3\,y_3 +$$

$$112\,i\,h_2^2\,x_3^3\,y_3 + 16\,i\,d\gamma\,h_2^2\,x_3^3\,y_3 - 56\,i\,x_1^2\,x_3^3\,y_3 - 8\,i\,d\gamma\,x_1^2\,x_3^3\,y_3 - 56\,i\,x_2^2\,x_3^3\,y_3 - 8\,i\,d\gamma\,x_2^2\,x_3^3\,y_3 -$$

$$28\,i\,x_3^5\,y_3 - 4\,i\,d\gamma\,x_3^5\,y_3 - 2520\,i\,h_1\,x_2\,y_1\,y_3 - 1284\,i\,d\gamma\,h_1\,x_2\,y_1\,y_3 - 216\,i\,d\gamma^2\,h_1\,x_2\,y_1\,y_3 -$$

$$12\,i\,d\gamma^3\,h_1\,x_2\,y_1\,y_3 - 84\,i\,h_1^3\,x_2\,y_1\,y_3 - 12\,i\,d\gamma\,h_1^3\,x_2\,y_1\,y_3 + 2520\,i\,h_2\,x_2\,y_1\,y_3 +$$

$$1284\,i\,d\gamma\,h_2\,x_2\,y_1\,y_3 + 216\,i\,d\gamma^2\,h_2\,x_2\,y_1\,y_3 + 12\,i\,d\gamma^3\,h_2\,x_2\,y_1\,y_3 + 294\,i\,h_1^2\,h_2\,x_2\,y_1\,y_3 +$$

$$42\,i\,d\gamma\,h_1^2\,h_2\,x_2\,y_1\,y_3 - 294\,i\,h_1\,h_2^2\,x_2\,y_1\,y_3 - 42\,i\,d\gamma\,h_1\,h_2^2\,x_2\,y_1\,y_3 + 84\,i\,h_2^3\,x_2\,y_1\,y_3 +$$

$$12\,i\,d\gamma\,h_2^3\,x_2\,y_1\,y_3 - 84\,i\,h_1\,x_1^2\,x_2\,y_1\,y_3 - 12\,i\,d\gamma\,h_1\,x_1^2\,x_2\,y_1\,y_3 + 210\,i\,h_2\,x_1^2\,x_2\,y_1\,y_3 +$$

$$30\,i\,d\gamma\,h_2\,x_1^2\,x_2\,y_1\,y_3 - 210\,i\,h_1\,x_2^3\,y_1\,y_3 - 30\,i\,d\gamma\,h_1\,x_2^3\,y_1\,y_3 + 84\,i\,h_2\,x_2^3\,y_1\,y_3 + 12\,i\,d\gamma\,h_2\,x_2^3\,y_1\,y_3 +$$

$$546\,i\,h_1\,x_2\,x_3^2\,y_1\,y_3 + 78\,i\,d\gamma\,h_1\,x_2\,x_3^2\,y_1\,y_3 - 546\,i\,h_2\,x_2\,x_3^2\,y_1\,y_3 - 78\,i\,d\gamma\,h_2\,x_2\,x_3^2\,y_1\,y_3 -$$

$$84\,h_1\,x_1\,x_2\,y_1^2\,y_3 - 12\,d\gamma\,h_1\,x_1\,x_2\,y_1^2\,y_3 + 210\,h_2\,x_1\,x_2\,y_1^2\,y_3 + 30\,d\gamma\,h_2\,x_1\,x_2\,y_1^2\,y_3 - 1680\,i\,x_3\,y_1^2\,y_3 -$$

$$856\,i\,d\gamma\,x_3\,y_1^2\,y_3 - 144\,i\,d\gamma^2\,x_3\,y_1^2\,y_3 - 8\,i\,d\gamma^3\,x_3\,y_1^2\,y_3 - 140\,i\,h_1^2\,x_3\,y_1^2\,y_3 - 20\,i\,d\gamma\,h_1^2\,x_3\,y_1^2\,y_3 +$$

$$476\,i\,h_1\,h_2\,x_3\,y_1^2\,y_3 + 68\,i\,d\gamma\,h_1\,h_2\,x_3\,y_1^2\,y_3 - 392\,i\,h_2^2\,x_3\,y_1^2\,y_3 - 56\,i\,d\gamma\,h_2^2\,x_3\,y_1^2\,y_3 -$$

$$56\,i\,x_1^2\,x_3\,y_1^2\,y_3 - 8\,i\,d\gamma\,x_1^2\,x_3\,y_1^2\,y_3 + 196\,i\,x_2^2\,x_3\,y_1^2\,y_3 + 28\,i\,d\gamma\,x_2^2\,x_3\,y_1^2\,y_3 - 56\,i\,x_3^3\,y_1^2\,y_3 -$$

$$8\,i\,d\gamma\,x_3^3\,y_1^2\,y_3 - 84\,i\,h_1\,x_2\,y_1^3\,y_3 - 12\,i\,d\gamma\,h_1\,x_2\,y_1^3\,y_3 + 210\,i\,h_2\,x_2\,y_1^3\,y_3 + 30\,i\,d\gamma\,h_2\,x_2\,y_1^3\,y_3 -$$

$$28\,i\,x_3\,y_1^4\,y_3 - 4\,i\,d\gamma\,x_3\,y_1^4\,y_3 - 2520\,i\,h_1\,x_1\,y_2\,y_3 - 1284\,i\,d\gamma\,h_1\,x_1\,y_2\,y_3 - 216\,i\,d\gamma^2\,h_1\,x_1\,y_2\,y_3 -$$

$$12\,i\,d\gamma^3\,h_1\,x_1\,y_2\,y_3 - 84\,i\,h_1^3\,x_1\,y_2\,y_3 - 12\,i\,d\gamma\,h_1^3\,x_1\,y_2\,y_3 + 2520\,i\,h_2\,x_1\,y_2\,y_3 +$$

$$1284\,i\,d\gamma\,h_2\,x_1\,y_2\,y_3 + 216\,i\,d\gamma^2\,h_2\,x_1\,y_2\,y_3 + 12\,i\,d\gamma^3\,h_2\,x_1\,y_2\,y_3 + 294\,i\,h_1^2\,h_2\,x_1\,y_2\,y_3 +$$

$$42\,i\,d\gamma\,h_1^2\,h_2\,x_1\,y_2\,y_3 - 294\,i\,h_1\,h_2^2\,x_1\,y_2\,y_3 - 42\,i\,d\gamma\,h_1\,h_2^2\,x_1\,y_2\,y_3 + 84\,i\,h_2^3\,x_1\,y_2\,y_3 +$$

$$12\,i\,d\gamma\,h_2^3\,x_1\,y_2\,y_3 - 84\,i\,h_1\,x_1^3\,y_2\,y_3 - 12\,i\,d\gamma\,h_1\,x_1^3\,y_2\,y_3 + 210\,i\,h_2\,x_1^3\,y_2\,y_3 + 30\,i\,d\gamma\,h_2\,x_1^3\,y_2\,y_3 -$$

$$210\,i\,h_1\,x_1\,x_2^2\,y_2\,y_3 - 30\,i\,d\gamma\,h_1\,x_1\,x_2^2\,y_2\,y_3 + 84\,i\,h_2\,x_1\,x_2^2\,y_2\,y_3 + 12\,i\,d\gamma\,h_2\,x_1\,x_2^2\,y_2\,y_3 +$$

$$546\,i\,h_1\,x_1\,x_3^2\,y_2\,y_3 + 78\,i\,d\gamma\,h_1\,x_1\,x_3^2\,y_2\,y_3 - 546\,i\,h_2\,x_1\,x_3^2\,y_2\,y_3 - 78\,i\,d\gamma\,h_2\,x_1\,x_3^2\,y_2\,y_3 +$$

$$2520\,h_1\,y_1\,y_2\,y_3 + 1284\,d\gamma\,h_1\,y_1\,y_2\,y_3 + 216\,d\gamma^2\,h_1\,y_1\,y_2\,y_3 + 12\,d\gamma^3\,h_1\,y_1\,y_2\,y_3 + 84\,h_1^3\,y_1\,y_2\,y_3 +$$

$12\,d\gamma\,h_1^3\,y_1\,y_2\,y_3 - 2520\,h_2\,y_1\,y_2\,y_3 - 1284\,d\gamma\,h_2\,y_1\,y_2\,y_3 - 216\,d\gamma^2\,h_2\,y_1\,y_2\,y_3 - 12\,d\gamma^3\,h_2\,y_1\,y_2\,y_3 -$
$294\,h_1^2\,h_2\,y_1\,y_2\,y_3 - 42\,d\gamma\,h_1^2\,h_2\,y_1\,y_2\,y_3 + 294\,h_1\,h_2^2\,y_1\,y_2\,y_3 + 42\,d\gamma\,h_1\,h_2^2\,y_1\,y_2\,y_3 - 84\,h_2^3\,y_1\,y_2\,y_3 -$
$12\,d\gamma\,h_2^3\,y_1\,y_2\,y_3 + 84\,h_1\,x_1^2\,y_1\,y_2\,y_3 + 12\,d\gamma\,h_1\,x_1^2\,y_1\,y_2\,y_3 - 210\,h_2\,x_1^2\,y_1\,y_2\,y_3 - 30\,d\gamma\,h_2\,x_1^2\,y_1\,y_2\,y_3 +$
$210\,h_1\,x_2^2\,y_1\,y_2\,y_3 + 30\,d\gamma\,h_1\,x_2^2\,y_1\,y_2\,y_3 - 84\,h_2\,x_2^2\,y_1\,y_2\,y_3 - 12\,d\gamma\,h_2\,x_2^2\,y_1\,y_2\,y_3 + 210\,h_1\,x_3^2\,y_1\,y_2\,y_3 +$
$30\,d\gamma\,h_1\,x_3^2\,y_1\,y_2\,y_3 - 210\,h_2\,x_3^2\,y_1\,y_2\,y_3 - 30\,d\gamma\,h_2\,x_3^2\,y_1\,y_2\,y_3 - 84\,i\,h_1\,x_1\,y_1^2\,y_2\,y_3 -$
$12\,i\,d\gamma\,h_1\,x_1\,y_1^2\,y_2\,y_3 + 210\,i\,h_2\,x_1\,y_1^2\,y_2\,y_3 + 30\,i\,d\gamma\,h_2\,x_1\,y_1^2\,y_2\,y_3 + 84\,h_1\,y_1^3\,y_2\,y_3 +$
$12\,d\gamma\,h_1\,y_1^3\,y_2\,y_3 - 210\,h_2\,y_1^3\,y_2\,y_3 - 30\,d\gamma\,h_2\,y_1^3\,y_2\,y_3 - 210\,h_1\,x_1\,x_2\,y_2^2\,y_3 - 30\,d\gamma\,h_1\,x_1\,x_2\,y_2^2\,y_3 +$
$84\,h_2\,x_1\,x_2\,y_2^2\,y_3 + 12\,d\gamma\,h_2\,x_1\,x_2\,y_2^2\,y_3 - 1680\,i\,x_3\,y_2^2\,y_3 - 856\,i\,d\gamma\,x_3\,y_2^2\,y_3 - 144\,i\,d\gamma^2\,x_3\,y_2^2\,y_3 -$
$8\,i\,d\gamma^3\,x_3\,y_2^2\,y_3 - 392\,i\,h_1^2\,x_3\,y_2^2\,y_3 - 56\,i\,d\gamma\,h_1^2\,x_3\,y_2^2\,y_3 + 476\,i\,h_1\,h_2\,x_3\,y_2^2\,y_3 + 68\,i\,d\gamma\,h_1\,h_2\,x_3\,y_2^2\,y_3 -$
$140\,i\,h_2^2\,x_3\,y_2^2\,y_3 - 20\,i\,d\gamma\,h_2^2\,x_3\,y_2^2\,y_3 + 196\,i\,x_1^2\,x_3\,y_2^2\,y_3 + 28\,i\,d\gamma\,x_1^2\,x_3\,y_2^2\,y_3 - 56\,i\,x_2^2\,x_3\,y_2^2\,y_3 -$
$8\,i\,d\gamma\,x_2^2\,x_3\,y_2^2\,y_3 - 56\,i\,x_3^3\,y_2^2\,y_3 - 8\,i\,d\gamma\,x_3^3\,y_2^2\,y_3 - 210\,i\,h_1\,x_2\,y_1\,y_2^2\,y_3 - 30\,i\,d\gamma\,h_1\,x_2\,y_1\,y_2^2\,y_3 +$
$84\,i\,h_2\,x_2\,y_1\,y_2^2\,y_3 + 12\,i\,d\gamma\,h_2\,x_2\,y_1\,y_2^2\,y_3 + 196\,i\,x_3\,y_1^2\,y_2^2\,y_3 + 28\,i\,d\gamma\,x_3\,y_1^2\,y_2^2\,y_3 -$
$210\,i\,h_1\,x_1\,y_2^3\,y_3 - 30\,i\,d\gamma\,h_1\,x_1\,y_2^3\,y_3 + 84\,i\,h_2\,x_1\,y_2^3\,y_3 + 12\,i\,d\gamma\,h_2\,x_1\,y_2^3\,y_3 + 210\,h_1\,y_1\,y_2^3\,y_3 +$
$30\,d\gamma\,h_1\,y_1\,y_2^3\,y_3 - 84\,h_2\,y_1\,y_2^3\,y_3 - 12\,d\gamma\,h_2\,y_1\,y_2^3\,y_3 - 28\,i\,x_3\,y_2^4\,y_3 - 4\,i\,d\gamma\,x_3\,y_2^4\,y_3 + 5040\,y_3^2 +$
$5508\,d\gamma\,y_3^2 + 2350\,d\gamma^2\,y_3^2 + 490\,d\gamma^3\,y_3^2 + 50\,d\gamma^4\,y_3^2 + 2\,d\gamma^5\,y_3^2 + 2100\,h_1^2\,y_3^2 + 1070\,d\gamma\,h_1^2\,y_3^2 +$
$180\,d\gamma^2\,h_1^2\,y_3^2 + 10\,d\gamma^3\,h_1^2\,y_3^2 + 56\,h_1^4\,y_3^2 + 8\,d\gamma\,h_1^4\,y_3^2 - 3360\,h_1\,h_2\,y_3^2 - 1712\,d\gamma\,h_1\,h_2\,y_3^2 -$
$288\,d\gamma^2\,h_1\,h_2\,y_3^2 - 16\,d\gamma^3\,h_1\,h_2\,y_3^2 - 280\,h_1^3\,h_2\,y_3^2 - 40\,d\gamma\,h_1^3\,h_2\,y_3^2 + 2100\,h_2^2\,y_3^2 + 1070\,d\gamma\,h_2^2\,y_3^2 +$
$180\,d\gamma^2\,h_2^2\,y_3^2 + 10\,d\gamma^3\,h_2^2\,y_3^2 + 462\,h_1^2\,h_2^2\,y_3^2 + 66\,d\gamma\,h_1^2\,h_2^2\,y_3^2 - 280\,h_1\,h_2^3\,y_3^2 - 40\,d\gamma\,h_1\,h_2^3\,y_3^2 +$
$56\,h_2^4\,y_3^2 + 8\,d\gamma\,h_2^4\,y_3^2 + 840\,x_1^2\,y_3^2 + 428\,d\gamma\,x_1^2\,y_3^2 + 72\,d\gamma^2\,x_1^2\,y_3^2 + 4\,d\gamma^3\,x_1^2\,y_3^2 + 70\,h_1^2\,x_1^2\,y_3^2 +$
$10\,d\gamma\,h_1^2\,x_1^2\,y_3^2 - 238\,h_1\,h_2\,x_1^2\,y_3^2 - 34\,d\gamma\,h_1\,h_2\,x_1^2\,y_3^2 + 196\,h_2^2\,x_1^2\,y_3^2 + 28\,d\gamma\,h_2^2\,x_1^2\,y_3^2 + 14\,x_1^4\,y_3^2 +$
$2\,d\gamma\,x_1^4\,y_3^2 + 840\,x_2^2\,y_3^2 + 428\,d\gamma\,x_2^2\,y_3^2 + 72\,d\gamma^2\,x_2^2\,y_3^2 + 4\,d\gamma^3\,x_2^2\,y_3^2 + 196\,h_1^2\,x_2^2\,y_3^2 + 28\,d\gamma\,h_1^2\,x_2^2\,y_3^2 -$
$238\,h_1\,h_2\,x_2^2\,y_3^2 - 34\,d\gamma\,h_1\,h_2\,x_2^2\,y_3^2 + 70\,h_2^2\,x_2^2\,y_3^2 + 10\,d\gamma\,h_2^2\,x_2^2\,y_3^2 - 182\,x_1^2\,x_2^2\,y_3^2 - 26\,d\gamma\,x_1^2\,x_2^2\,y_3^2 +$
$14\,x_2^4\,y_3^2 + 2\,d\gamma\,x_2^4\,y_3^2 - 546\,i\,h_1\,x_1\,x_2\,x_3\,y_3^2 - 78\,i\,d\gamma\,h_1\,x_1\,x_2\,x_3\,y_3^2 + 546\,i\,h_2\,x_1\,x_2\,x_3\,y_3^2 +$
$78\,i\,d\gamma\,h_2\,x_1\,x_2\,x_3\,y_3^2 - 14\,x_3^4\,y_3^2 - 2\,d\gamma\,x_3^4\,y_3^2 - 168\,i\,x_1\,x_2^2\,y_1\,y_3^2 - 24\,i\,d\gamma\,x_1\,x_2^2\,y_1\,y_3^2 -$
$210\,h_1\,x_2\,x_3\,y_1\,y_3^2 - 30\,d\gamma\,h_1\,x_2\,x_3\,y_1\,y_3^2 + 210\,h_2\,x_2\,x_3\,y_1\,y_3^2 + 30\,d\gamma\,h_2\,x_2\,x_3\,y_1\,y_3^2 + 840\,y_1^2\,y_3^2 +$
$428\,d\gamma\,y_1^2\,y_3^2 + 72\,d\gamma^2\,y_1^2\,y_3^2 + 4\,d\gamma^3\,y_1^2\,y_3^2 + 70\,h_1^2\,y_1^2\,y_3^2 + 10\,d\gamma\,h_1^2\,y_1^2\,y_3^2 - 238\,h_1\,h_2\,y_1^2\,y_3^2 -$
$34\,d\gamma\,h_1\,h_2\,y_1^2\,y_3^2 + 196\,h_2^2\,y_1^2\,y_3^2 + 28\,d\gamma\,h_2^2\,y_1^2\,y_3^2 + 28\,x_1^2\,y_1^2\,y_3^2 + 4\,d\gamma\,x_1^2\,y_1^2\,y_3^2 - 14\,x_2^2\,y_1^2\,y_3^2 -$
$2\,d\gamma\,x_2^2\,y_1^2\,y_3^2 + 14\,y_1^4\,y_3^2 + 2\,d\gamma\,y_1^4\,y_3^2 - 168\,i\,x_1^2\,x_2\,y_2\,y_3^2 - 24\,i\,d\gamma\,x_1^2\,x_2\,y_2\,y_3^2 - 210\,h_1\,x_1\,x_3\,y_2\,y_3^2 -$
$30\,d\gamma\,h_1\,x_1\,x_3\,y_2\,y_3^2 + 210\,h_2\,x_1\,x_3\,y_2\,y_3^2 + 30\,d\gamma\,h_2\,x_1\,x_3\,y_2\,y_3^2 + 336\,x_1\,x_2\,y_1\,y_2\,y_3^2 +$
$48\,d\gamma\,x_1\,x_2\,y_1\,y_2\,y_3^2 + 546\,i\,h_1\,x_3\,y_1\,y_2\,y_3^2 + 78\,i\,d\gamma\,h_1\,x_3\,y_1\,y_2\,y_3^2 - 546\,i\,h_2\,x_3\,y_1\,y_2\,y_3^2 -$
$78\,i\,d\gamma\,h_2\,x_3\,y_1\,y_2\,y_3^2 + 168\,i\,x_2\,y_1^2\,y_2\,y_3^2 + 24\,i\,d\gamma\,x_2\,y_1^2\,y_2\,y_3^2 + 840\,y_2^2\,y_3^2 + 428\,d\gamma\,y_2^2\,y_3^2 +$
$72\,d\gamma^2\,y_2^2\,y_3^2 + 4\,d\gamma^3\,y_2^2\,y_3^2 + 196\,h_1^2\,y_2^2\,y_3^2 + 28\,d\gamma\,h_1^2\,y_2^2\,y_3^2 - 238\,h_1\,h_2\,y_2^2\,y_3^2 - 34\,d\gamma\,h_1\,h_2\,y_2^2\,y_3^2 +$
$70\,h_2^2\,y_2^2\,y_3^2 + 10\,d\gamma\,h_2^2\,y_2^2\,y_3^2 - 14\,x_1^2\,y_2^2\,y_3^2 - 2\,d\gamma\,x_1^2\,y_2^2\,y_3^2 + 28\,x_2^2\,y_2^2\,y_3^2 + 4\,d\gamma\,x_2^2\,y_2^2\,y_3^2 +$
$168\,i\,x_1\,y_1\,y_2^2\,y_3^2 + 24\,i\,d\gamma\,x_1\,y_1\,y_2^2\,y_3^2 - 182\,y_1^2\,y_2^2\,y_3^2 - 26\,d\gamma\,y_1^2\,y_2^2\,y_3^2 + 14\,y_2^4\,y_3^2 + 2\,d\gamma\,y_2^4\,y_3^2 +$
$294\,h_1\,x_1\,x_2\,y_3^3 + 42\,d\gamma\,h_1\,x_1\,x_2\,y_3^3 - 294\,h_2\,x_1\,x_2\,y_3^3 - 42\,d\gamma\,h_2\,x_1\,x_2\,y_3^3 - 1680\,i\,x_3\,y_3^3 -$
$856\,i\,d\gamma\,x_3\,y_3^3 - 144\,i\,d\gamma^2\,x_3\,y_3^3 - 8\,i\,d\gamma^3\,x_3\,y_3^3 + 112\,i\,h_1^2\,x_3\,y_3^3 + 16\,i\,d\gamma\,h_1^2\,x_3\,y_3^3 -$
$280\,i\,h_1\,h_2\,x_3\,y_3^3 - 40\,i\,d\gamma\,h_1\,h_2\,x_3\,y_3^3 + 112\,i\,h_2^2\,x_3\,y_3^3 + 16\,i\,d\gamma\,h_2^2\,x_3\,y_3^3 - 56\,i\,x_1^2\,x_3\,y_3^3 -$
$8\,i\,d\gamma\,x_1^2\,x_3\,y_3^3 - 56\,i\,x_2^2\,x_3\,y_3^3 - 8\,i\,d\gamma\,x_2^2\,x_3\,y_3^3 - 56\,i\,x_3^3\,y_3^3 - 8\,i\,d\gamma\,x_3^3\,y_3^3 + 42\,i\,h_1\,x_2\,y_1\,y_3^3 +$
$6\,i\,d\gamma\,h_1\,x_2\,y_1\,y_3^3 - 42\,i\,h_2\,x_2\,y_1\,y_3^3 - 6\,i\,d\gamma\,h_2\,x_2\,y_1\,y_3^3 - 56\,i\,x_3\,y_1^2\,y_3^3 - 8\,i\,d\gamma\,x_3\,y_1^2\,y_3^3 +$
$42\,i\,h_1\,x_1\,y_2\,y_3^3 + 6\,i\,d\gamma\,h_1\,x_1\,y_2\,y_3^3 - 42\,i\,h_2\,x_1\,y_2\,y_3^3 - 6\,i\,d\gamma\,h_2\,x_1\,y_2\,y_3^3 - 294\,h_1\,y_1\,y_2\,y_3^3 -$
$42\,d\gamma\,h_1\,y_1\,y_2\,y_3^3 + 294\,h_2\,y_1\,y_2\,y_3^3 + 42\,d\gamma\,h_2\,y_1\,y_2\,y_3^3 - 56\,i\,x_3\,y_2^2\,y_3^3 - 8\,i\,d\gamma\,x_3\,y_2^2\,y_3^3 + 840\,y_3^4 +$
$428\,d\gamma\,y_3^4 + 72\,d\gamma^2\,y_3^4 + 4\,d\gamma^3\,y_3^4 - 56\,h_1^2\,y_3^4 - 8\,d\gamma\,h_1^2\,y_3^4 + 140\,h_1\,h_2\,y_3^4 + 20\,d\gamma\,h_1\,h_2\,y_3^4 - 56\,h_2^2\,y_3^4 -$
$8\,d\gamma\,h_2^2\,y_3^4 + 28\,x_1^2\,y_3^4 + 4\,d\gamma\,x_1^2\,y_3^4 + 28\,x_2^2\,y_3^4 + 4\,d\gamma\,x_2^2\,y_3^4 + 14\,x_3^2\,y_3^4 + 2\,d\gamma\,x_3^2\,y_3^4 + 28\,y_1^2\,y_3^4 +$
$4\,d\gamma\,y_1^2\,y_3^4 + 28\,y_2^2\,y_3^4 + 4\,d\gamma\,y_2^2\,y_3^4 - 28\,i\,x_3\,y_3^5 - 4\,i\,d\gamma\,x_3\,y_3^5 + 14\,y_3^6 + 2\,d\gamma\,y_3^6 - A[\![1, 8]\!]\,$ // Expand

Out[•]= 0

In[ ]:= (* $Y^G{}_{\alpha_1} \, \pi^{\lambda_1}{}_{1,k}$ *)

k = 7;

$-\left(-\dfrac{1}{2} \; (\; (2\,y_1 - \dot{\imath}\,2\,x_1)\,D[A[\![1, k]\!], h_1] \; - \; (2\,h_1 - h_2)\,D[A[\![1, k]\!], y_1] \; + \right.$

$\dot{\imath}\;(2\,h_1 - h_2)\,D[A[\![1, k]\!], x_1] + (x_2 - \dot{\imath}\,y_2)\,D[A[\![1, k]\!], x_3] + (y_2 + \dot{\imath}\,x_2)\,D[A[\![1, k]\!], y_3] \; +$

$\left. (-x_3 - \dot{\imath}\,y_3)\,D[A[\![1, k]\!], x_2] + (-y_3 + \dot{\imath}\,x_3)\,D[A[\![1, k]\!], y_2])\right)$ // Expand

Out[ ]= 0

In[ ]:= (* $Y^G{}_{\alpha_1} \, \pi^{\lambda_1}{}_{1,k}$ *)

k = 8;

$-\left(-\dfrac{1}{2} \; (\; (2\,y_1 - \dot{\imath}\,2\,x_1)\,D[A[\![1, k]\!], h_1] \; - \; (2\,h_1 - h_2)\,D[A[\![1, k]\!], y_1] \; + \right.$

$\dot{\imath}\;(2\,h_1 - h_2)\,D[A[\![1, k]\!], x_1] + (x_2 - \dot{\imath}\,y_2)\,D[A[\![1, k]\!], x_3] + (y_2 + \dot{\imath}\,x_2)\,D[A[\![1, k]\!], y_3] \; +$

$\left. (-x_3 - \dot{\imath}\,y_3)\,D[A[\![1, k]\!], x_2] + (-y_3 + \dot{\imath}\,x_3)\,D[A[\![1, k]\!], y_2])\right)$ // Expand

Out[ ]= 0

(* Descending from the highest weight element *)

(* $X^G{}_{\alpha_1} \, \pi_{1,1}$ *)

k = 1;

$\left(\dfrac{1}{2} \; (\; (2\,y_1 + \dot{\imath}\,2\,x_1)\,D[A[\![k, 1]\!], h_1] \; - \; (2\,h_1 - h_2)\,D[A[\![k, 1]\!], y_1] \; - \right.$

$\dot{\imath}\;(2\,h_1 - h_2)\,D[A[\![k, 1]\!], x_1] + (x_2 + \dot{\imath}\,y_2)\,D[A[\![k, 1]\!], x_3] + (y_2 - \dot{\imath}\,x_2)\,D[A[\![k, 1]\!], y_3] \; +$

$\left. (-x_3 + \dot{\imath}\,y_3)\,D[A[\![k, 1]\!], x_2] + (-y_3 - \dot{\imath}\,x_3)\,D[A[\![k, 1]\!], y_2])\right)$ // Expand

In[ ]:=

$-5040\,x_1 - 8028\,d\gamma\,x_1 - 5104\,d\gamma^2\,x_1 - 1665\,d\gamma^3\,x_1 - 295\,d\gamma^4\,x_1 - 27\,d\gamma^5\,x_1 - d\gamma^6\,x_1 -$
$4200\,h_1^2\,x_1 - 3190\,d\gamma\,h_1^2\,x_1 - 895\,d\gamma^2\,h_1^2\,x_1 - 110\,d\gamma^3\,h_1^2\,x_1 - 5\,d\gamma^4\,h_1^2\,x_1 - 168\,h_1^4\,x_1 -$
$52\,d\gamma\,h_1^4\,x_1 - 4\,d\gamma^2\,h_1^4\,x_1 - 7560\,\dot{\imath}\,h_2\,x_1 - 8262\,\dot{\imath}\,d\gamma\,h_2\,x_1 - 3525\,\dot{\imath}\,d\gamma^2\,h_2\,x_1 - 735\,\dot{\imath}\,d\gamma^3\,h_2\,x_1 -$
$75\,\dot{\imath}\,d\gamma^4\,h_2\,x_1 - 3\,\dot{\imath}\,d\gamma^5\,h_2\,x_1 + 4200\,h_1\,h_2\,x_1 + 3190\,d\gamma\,h_1\,h_2\,x_1 + 895\,d\gamma^2\,h_1\,h_2\,x_1 +$
$110\,d\gamma^3\,h_1\,h_2\,x_1 + \boxed{\cdots 2192 \cdots} + 28\,y_2^3\,y_3^3 + 4\,d\gamma\,y_2^3\,y_3^3 - 42\,x_1\,y_3^4 - 13\,d\gamma\,x_1\,y_3^4 - d\gamma^2\,x_1\,y_3^4 -$
$21\,\dot{\imath}\,h_1\,x_1\,y_3^4 - 3\,\dot{\imath}\,d\gamma\,h_1\,x_1\,y_3^4 + 21\,\dot{\imath}\,h_2\,x_1\,y_3^4 + 3\,\dot{\imath}\,d\gamma\,h_2\,x_1\,y_3^4 + 14\,x_2\,x_3\,y_3^4 + 2\,d\gamma\,x_2\,x_3\,y_3^4 +$
$42\,\dot{\imath}\,y_1\,y_3^4 + 13\,\dot{\imath}\,d\gamma\,y_1\,y_3^4 + \dot{\imath}\,d\gamma^2\,y_1\,y_3^4 - 21\,h_1\,y_1\,y_3^4 - 3\,d\gamma\,h_1\,y_1\,y_3^4 + 21\,h_2\,y_1\,y_3^4 +$
$3\,d\gamma\,h_2\,y_1\,y_3^4 + 14\,\dot{\imath}\,x_3\,y_2\,y_3^4 + 2\,\dot{\imath}\,d\gamma\,x_3\,y_2\,y_3^4 - 14\,\dot{\imath}\,x_2\,y_3^5 - 2\,\dot{\imath}\,d\gamma\,x_2\,y_3^5 + 14\,y_2\,y_3^5 + 2\,d\gamma\,y_2\,y_3^5$

large output | **show less** | **show more** | **show all** | **set size limit...**

Out[ ]= 0

In[ ]:= (* $Y^G{}_{\alpha_1} \, \pi_{j,k}$ *)

j = 2; k = 1;

$-\left(-\dfrac{1}{2} \; (\; (2\,y_1 - \dot{\imath}\,2\,x_1)\,D[A[\![j, k]\!], h_1] \; - \; (2\,h_1 - h_2)\,D[A[\![j, k]\!], y_1] \; + \right.$

$\dot{\imath}\;(2\,h_1 - h_2)\,D[A[\![j, k]\!], x_1] + (x_2 - \dot{\imath}\,y_2)\,D[A[\![j, k]\!], x_3] + (y_2 + \dot{\imath}\,x_2)\,D[A[\![j, k]\!], y_3] \; +$

$\left. (-x_3 - \dot{\imath}\,y_3)\,D[A[\![j, k]\!], x_2] + (-y_3 + \dot{\imath}\,x_3)\,D[A[\![j, k]\!], y_2])\right)$ // Expand

In[ ]:= $-10080\,\dot{\imath}\,h_1 - 16056\,\dot{\imath}\,d\gamma\,h_1 - 10208\,\dot{\imath}\,d\gamma^2\,h_1 - 3330\,\dot{\imath}\,d\gamma^3\,h_1 - 590\,\dot{\imath}\,d\gamma^4\,h_1 - 54\,\dot{\imath}\,d\gamma^5\,h_1 - 2\,\dot{\imath}\,d\gamma^6\,h_1 -$
$8400\,\dot{\imath}\,h_1^3 - 6380\,\dot{\imath}\,d\gamma\,h_1^3 - 1790\,\dot{\imath}\,d\gamma^2\,h_1^3 - 220\,\dot{\imath}\,d\gamma^3\,h_1^3 - 10\,\dot{\imath}\,d\gamma^4\,h_1^3 - 336\,\dot{\imath}\,h_1^5 - 104\,\dot{\imath}\,d\gamma\,h_1^5 -$

$8 \, i \, d\gamma^2 \, h_1^5 + 5040 \, i \, h_2 + 8028 \, i \, d\gamma \, h_2 + 5104 \, i \, d\gamma^2 \, h_2 + 1665 \, i \, d\gamma^3 \, h_2 + 295 \, i \, d\gamma^4 \, h_2 + 27 \, i \, d\gamma^5 \, h_2 +$

$i \, d\gamma^6 \, h_2 + 15\,120 \, h_1 \, h_2 + 16\,524 \, d\gamma \, h_1 \, h_2 + 7050 \, d\gamma^2 \, h_1 \, h_2 + 1470 \, d\gamma^3 \, h_1 \, h_2 + 150 \, d\gamma^4 \, h_1 \, h_2 +$

$6 \, d\gamma^5 \, h_1 \, h_2 + 12\,600 \, i \, h_1^2 \, h_2 + 9570 \, i \, d\gamma \, h_1^2 \, h_2 + 2685 \, i \, d\gamma^2 \, h_1^2 \, h_2 + 330 \, i \, d\gamma^3 \, h_1^2 \, h_2 + 15 \, i \, d\gamma^4 \, h_1^2 \, h_2 +$

$5040 \, h_1^3 \, h_2 + 2568 \, d\gamma \, h_1^3 \, h_2 + 432 \, d\gamma^2 \, h_1^3 \, h_2 + 24 \, d\gamma^3 \, h_1^3 \, h_2 + 840 \, i \, h_1^4 \, h_2 + 260 \, i \, d\gamma \, h_1^4 \, h_2 +$

$20 \, i \, d\gamma^2 \, h_1^4 \, h_2 - 7560 \, h_2^2 - 8262 \, d\gamma \, h_2^2 - 3525 \, d\gamma^2 \, h_2^2 - 735 \, d\gamma^3 \, h_2^2 - 75 \, d\gamma^4 \, h_2^2 - 3 \, d\gamma^5 \, h_2^2 -$

$2520 \, i \, h_1 \, h_2^2 - 1914 \, i \, d\gamma \, h_1 \, h_2^2 - 537 \, i \, d\gamma^2 \, h_1 \, h_2^2 - 66 \, i \, d\gamma^3 \, h_1 \, h_2^2 - 3 \, i \, d\gamma^4 \, h_1 \, h_2^2 - 7560 \, h_1^2 \, h_2^2 -$

$3852 \, d\gamma \, h_1^2 \, h_2^2 - 648 \, d\gamma^2 \, h_1^2 \, h_2^2 - 36 \, d\gamma^3 \, h_1^2 \, h_2^2 - 84 \, i \, h_1^3 \, h_2^2 - 26 \, i \, d\gamma \, h_1^3 \, h_2^2 - 2 \, i \, d\gamma^2 \, h_1^3 \, h_2^2 - 840 \, i \, h_2^3 -$

$638 \, i \, d\gamma \, h_2^3 - 179 \, i \, d\gamma^2 \, h_2^3 - 22 \, i \, d\gamma^3 \, h_2^3 - i \, d\gamma^4 \, h_2^3 + 3780 \, h_1 \, h_2^3 + 1926 \, d\gamma \, h_1 \, h_2^3 + 324 \, d\gamma^2 \, h_1 \, h_2^3 +$

$18 \, d\gamma^3 \, h_1 \, h_2^3 - 714 \, i \, h_1^2 \, h_2^3 - 221 \, i \, d\gamma \, h_1^2 \, h_2^3 - 17 \, i \, d\gamma^2 \, h_1^2 \, h_2^3 - 630 \, h_2^4 - 321 \, d\gamma \, h_2^4 - 54 \, d\gamma^2 \, h_2^4 -$

$3 \, d\gamma^3 \, h_2^4 + 462 \, i \, h_1 \, h_2^4 + 143 \, i \, d\gamma \, h_1 \, h_2^4 + 11 \, i \, d\gamma^2 \, h_1 \, h_2^4 - 84 \, i \, h_2^5 - 26 \, i \, d\gamma \, h_2^5 - 2 \, i \, d\gamma^2 \, h_2^5 -$

$8400 \, i \, h_1 \, x_1^2 - 6380 \, i \, d\gamma \, h_1 \, x_1^2 - 1790 \, i \, d\gamma^2 \, h_1 \, x_1^2 - 220 \, i \, d\gamma^3 \, h_1 \, x_1^2 - 10 \, i \, d\gamma^4 \, h_1 \, x_1^2 - 672 \, i \, h_1^3 \, x_1^2 -$

$208 \, i \, d\gamma \, h_1^3 \, x_1^2 - 16 \, i \, d\gamma^2 \, h_1^3 \, x_1^2 + 4200 \, i \, h_2 \, x_1^2 + 3190 \, i \, d\gamma \, h_2 \, x_1^2 + 895 \, i \, d\gamma^2 \, h_2 \, x_1^2 + 110 \, i \, d\gamma^3 \, h_2 \, x_1^2 +$

$5 \, i \, d\gamma^4 \, h_2 \, x_1^2 + 5040 \, h_1 \, h_2 \, x_1^2 + 2568 \, d\gamma \, h_1 \, h_2 \, x_1^2 + 432 \, d\gamma^2 \, h_1 \, h_2 \, x_1^2 + 24 \, d\gamma^3 \, h_1 \, h_2 \, x_1^2 + 1008 \, i \, h_1^2 \, h_2 \, x_1^2 +$

$312 \, i \, d\gamma \, h_1^2 \, h_2 \, x_1^2 + 24 \, i \, d\gamma^2 \, h_1^2 \, h_2 \, x_1^2 - 2520 \, h_2^2 \, x_1^2 - 1284 \, d\gamma \, h_2^2 \, x_1^2 - 216 \, d\gamma^2 \, h_2^2 \, x_1^2 - 12 \, d\gamma^3 \, h_2^2 \, x_1^2 +$

$252 \, i \, h_1 \, h_2^2 \, x_1^2 + 78 \, i \, d\gamma \, h_1 \, h_2^2 \, x_1^2 + 6 \, i \, d\gamma^2 \, h_1 \, h_2^2 \, x_1^2 - 294 \, i \, h_2^3 \, x_1^2 - 91 \, i \, d\gamma \, h_2^3 \, x_1^2 - 7 \, i \, d\gamma^2 \, h_2^3 \, x_1^2 -$

$336 \, i \, h_1 \, x_1^4 - 104 \, i \, d\gamma \, h_1 \, x_1^4 - 8 \, i \, d\gamma^2 \, h_1 \, x_1^4 + 168 \, i \, h_2 \, x_1^4 + 52 \, i \, d\gamma \, h_2 \, x_1^4 + 4 \, i \, d\gamma^2 \, h_2 \, x_1^4 - 2520 \, x_2^2 -$

$2754 \, d\gamma \, x_2^2 - 1175 \, d\gamma^2 \, x_2^2 - 245 \, d\gamma^3 \, x_2^2 - 25 \, d\gamma^4 \, x_2^2 - d\gamma^5 \, x_2^2 - 3360 \, i \, h_1 \, x_2^2 - 2552 \, i \, d\gamma \, h_1 \, x_2^2 -$

$716 \, i \, d\gamma^2 \, h_1 \, x_2^2 - 88 \, i \, d\gamma^3 \, h_1 \, x_2^2 - 4 \, i \, d\gamma^4 \, h_1 \, x_2^2 - 2310 \, h_1^2 \, x_2^2 - 1177 \, d\gamma \, h_1^2 \, x_2^2 - 198 \, d\gamma^2 \, h_1^2 \, x_2^2 -$

$11 \, d\gamma^3 \, h_1^2 \, x_2^2 - 420 \, i \, h_1^3 \, x_2^2 - 130 \, i \, d\gamma \, h_1^3 \, x_2^2 - 10 \, i \, d\gamma^2 \, h_1^3 \, x_2^2 + 56 \, h_1^4 \, x_2^2 + 8 \, d\gamma \, h_1^4 \, x_2^2 - 840 \, i \, h_2 \, x_2^2 -$

$638 \, i \, d\gamma \, h_2 \, x_2^2 - 179 \, i \, d\gamma^2 \, h_2 \, x_2^2 - 22 \, i \, d\gamma^3 \, h_2 \, x_2^2 - i \, d\gamma^4 \, h_2 \, x_2^2 + 2940 \, h_1 \, h_2 \, x_2^2 + 1498 \, d\gamma \, h_1 \, h_2 \, x_2^2 +$

$252 \, d\gamma^2 \, h_1 \, h_2 \, x_2^2 + 14 \, d\gamma^3 \, h_1 \, h_2 \, x_2^2 - 630 \, i \, h_1^2 \, h_2 \, x_2^2 - 195 \, i \, d\gamma \, h_1^2 \, h_2 \, x_2^2 - 15 \, i \, d\gamma^2 \, h_1^2 \, h_2 \, x_2^2 +$

$56 \, h_1^3 \, h_2 \, x_2^2 + 8 \, d\gamma \, h_1^3 \, h_2 \, x_2^2 - 420 \, h_2^2 \, x_2^2 - 214 \, d\gamma \, h_2^2 \, x_2^2 - 36 \, d\gamma^2 \, h_2^2 \, x_2^2 - 2 \, d\gamma^3 \, h_2^2 \, x_2^2 + 756 \, i \, h_1 \, h_2^2 \, x_2^2 +$

$234 \, i \, d\gamma \, h_1 \, h_2^2 \, x_2^2 + 18 \, i \, d\gamma^2 \, h_1 \, h_2^2 \, x_2^2 - 42 \, h_1^2 \, h_2^2 \, x_2^2 - 6 \, d\gamma \, h_1^2 \, h_2^2 \, x_2^2 - 168 \, i \, h_2^3 \, x_2^2 - 52 \, i \, d\gamma \, h_2^3 \, x_2^2 -$

$4 \, i \, d\gamma^2 \, h_2^3 \, x_2^2 - 28 \, h_1 \, h_2^3 \, x_2^2 - 4 \, d\gamma \, h_1 \, h_2^3 \, x_2^2 + 14 \, h_2^4 \, x_2^2 + 2 \, d\gamma \, h_2^4 \, x_2^2 - 1050 \, x_1^2 \, x_2^2 - 535 \, d\gamma \, x_1^2 \, x_2^2 -$

$90 \, d\gamma^2 \, x_1^2 \, x_2^2 - 5 \, d\gamma^3 \, x_1^2 \, x_2^2 - 420 \, i \, h_1 \, x_1^2 \, x_2^2 - 130 \, i \, d\gamma \, h_1 \, x_1^2 \, x_2^2 - 10 \, i \, d\gamma^2 \, h_1 \, x_1^2 \, x_2^2 + 28 \, h_1^2 \, x_1^2 \, x_2^2 +$

$4 \, d\gamma \, h_1^2 \, x_1^2 \, x_2^2 - 294 \, i \, h_2 \, x_1^2 \, x_2^2 - 91 \, i \, d\gamma \, h_2 \, x_1^2 \, x_2^2 - 7 \, i \, d\gamma^2 \, h_2 \, x_1^2 \, x_2^2 + 140 \, h_1 \, h_2 \, x_1^2 \, x_2^2 + 20 \, d\gamma \, h_1 \, h_2 \, x_1^2 \, x_2^2 -$

$14 \, h_2^2 \, x_1^2 \, x_2^2 - 2 \, d\gamma \, h_2^2 \, x_1^2 \, x_2^2 - 28 \, x_1^4 \, x_2^2 - 4 \, d\gamma \, x_1^4 \, x_2^2 + 210 \, x_2^4 + 107 \, d\gamma \, x_2^4 + 18 \, d\gamma^2 \, x_2^4 + d\gamma^3 \, x_2^4 +$

$294 \, i \, h_1 \, x_2^4 + 91 \, i \, d\gamma \, h_1 \, x_2^4 + 7 \, i \, d\gamma^2 \, h_1 \, x_2^4 - 56 \, h_1^2 \, x_2^4 - 8 \, d\gamma \, h_1^2 \, x_2^4 - 84 \, i \, h_2 \, x_2^4 - 26 \, i \, d\gamma \, h_2 \, x_2^4 -$

$2 \, i \, d\gamma^2 \, h_2 \, x_2^4 - 28 \, h_1 \, h_2 \, x_2^4 - 4 \, d\gamma \, h_1 \, h_2 \, x_2^4 + 28 \, h_2^2 \, x_2^4 + 4 \, d\gamma \, h_2^2 \, x_2^4 - 14 \, x_1^2 \, x_2^4 - 2 \, d\gamma \, x_1^2 \, x_2^4 + 14 \, x_2^6 +$

$2 \, d\gamma \, x_2^6 + 2520 \, x_3^2 + 2754 \, d\gamma \, x_3^2 + 1175 \, d\gamma^2 \, x_3^2 + 245 \, d\gamma^3 \, x_3^2 + 25 \, d\gamma^4 \, x_3^2 + d\gamma^5 \, x_3^2 - 3360 \, i \, h_1 \, x_3^2 -$

$2552 \, i \, d\gamma \, h_1 \, x_3^2 - 716 \, i \, d\gamma^2 \, h_1 \, x_3^2 - 88 \, i \, d\gamma^3 \, h_1 \, x_3^2 - 4 \, i \, d\gamma^4 \, h_1 \, x_3^2 + 2310 \, h_1^2 \, x_3^2 + 1177 \, d\gamma \, h_1^2 \, x_3^2 +$

$198 \, d\gamma^2 \, h_1^2 \, x_3^2 + 11 \, d\gamma^3 \, h_1^2 \, x_3^2 - 420 \, i \, h_1^3 \, x_3^2 - 130 \, i \, d\gamma \, h_1^3 \, x_3^2 - 10 \, i \, d\gamma^2 \, h_1^3 \, x_3^2 - 56 \, h_1^4 \, x_3^2 - 8 \, d\gamma \, h_1^4 \, x_3^2 +$

$4200 \, i \, h_2 \, x_3^2 + 3190 \, i \, d\gamma \, h_2 \, x_3^2 + 895 \, i \, d\gamma^2 \, h_2 \, x_3^2 + 110 \, i \, d\gamma^3 \, h_2 \, x_3^2 + 5 \, i \, d\gamma^4 \, h_2 \, x_3^2 - 1680 \, h_1 \, h_2 \, x_3^2 -$

$856 \, d\gamma \, h_1 \, h_2 \, x_3^2 - 144 \, d\gamma^2 \, h_1 \, h_2 \, x_3^2 - 8 \, d\gamma^3 \, h_1 \, h_2 \, x_3^2 + 1890 \, i \, h_1^2 \, h_2 \, x_3^2 + 585 \, i \, d\gamma \, h_1^2 \, h_2 \, x_3^2 +$

$45 \, i \, d\gamma^2 \, h_1^2 \, h_2 \, x_3^2 + 280 \, h_1^3 \, h_2 \, x_3^2 + 40 \, d\gamma \, h_1^3 \, h_2 \, x_3^2 - 210 \, h_2^2 \, x_3^2 - 107 \, d\gamma \, h_2^2 \, x_3^2 - 18 \, d\gamma^2 \, h_2^2 \, x_3^2 -$

$d\gamma^3 \, h_2^2 \, x_3^2 - 1764 \, i \, h_1 \, h_2^2 \, x_3^2 - 546 \, i \, d\gamma \, h_1 \, h_2^2 \, x_3^2 - 42 \, i \, d\gamma^2 \, h_1 \, h_2^2 \, x_3^2 - 462 \, h_1^2 \, h_2^2 \, x_3^2 - 66 \, d\gamma \, h_1^2 \, h_2^2 \, x_3^2 +$

$462 \, i \, h_2^3 \, x_3^2 + 143 \, i \, d\gamma \, h_2^3 \, x_3^2 + 11 \, i \, d\gamma^2 \, h_2^3 \, x_3^2 + 280 \, h_1 \, h_2^3 \, x_3^2 + 40 \, d\gamma \, h_1 \, h_2^3 \, x_3^2 - 56 \, h_2^4 \, x_3^2 - 8 \, d\gamma \, h_2^4 \, x_3^2 +$

$1050 \, x_1^2 \, x_3^2 + 535 \, d\gamma \, x_1^2 \, x_3^2 + 90 \, d\gamma^2 \, x_1^2 \, x_3^2 + 5 \, d\gamma^3 \, x_1^2 \, x_3^2 - 420 \, i \, h_1 \, x_1^2 \, x_3^2 - 130 \, i \, d\gamma \, h_1 \, x_1^2 \, x_3^2 -$

$10 \, i \, d\gamma^2 \, h_1 \, x_1^2 \, x_3^2 - 28 \, h_1^2 \, x_1^2 \, x_3^2 - 4 \, d\gamma \, h_1^2 \, x_1^2 \, x_3^2 + 714 \, i \, h_2 \, x_1^2 \, x_3^2 + 221 \, i \, d\gamma \, h_2 \, x_1^2 \, x_3^2 + 17 \, i \, d\gamma^2 \, h_2 \, x_1^2 \, x_3^2 +$

$196 \, h_1 \, h_2 \, x_1^2 \, x_3^2 + 28 \, d\gamma \, h_1 \, h_2 \, x_1^2 \, x_3^2 - 154 \, h_2^2 \, x_1^2 \, x_3^2 - 22 \, d\gamma \, h_2^2 \, x_1^2 \, x_3^2 + 28 \, x_1^4 \, x_3^2 + 4 \, d\gamma \, x_1^4 \, x_3^2 -$

$924 \, i \, h_1 \, x_2^2 \, x_3^2 - 286 \, i \, d\gamma \, h_1 \, x_2^2 \, x_3^2 - 22 \, i \, d\gamma^2 \, h_1 \, x_2^2 \, x_3^2 + 462 \, i \, h_2 \, x_2^2 \, x_3^2 + 143 \, i \, d\gamma \, h_2 \, x_2^2 \, x_3^2 +$

$11 \, i \, d\gamma^2 \, h_2 \, x_2^2 \, x_3^2 + 84 \, h_1 \, h_2 \, x_2^2 \, x_3^2 + 12 \, d\gamma \, h_1 \, h_2 \, x_2^2 \, x_3^2 - 42 \, h_2^2 \, x_2^2 \, x_3^2 - 6 \, d\gamma \, h_2^2 \, x_2^2 \, x_3^2 + 14 \, x_2^4 \, x_3^2 +$

$2 \, d\gamma \, x_2^4 \, x_3^2 - 210 \, x_3^4 - 107 \, d\gamma \, x_3^4 - 18 \, d\gamma^2 \, x_3^4 - d\gamma^3 \, x_3^4 + 294 \, i \, h_1 \, x_3^4 + 91 \, i \, d\gamma \, h_1 \, x_3^4 + 7 \, i \, d\gamma^2 \, h_1 \, x_3^4 +$

$56 \, h_1^2 \, x_3^4 + 8 \, d\gamma \, h_1^2 \, x_3^4 - 210 \, i \, h_2 \, x_3^4 - 65 \, i \, d\gamma \, h_2 \, x_3^4 - 5 \, i \, d\gamma^2 \, h_2 \, x_3^4 - 140 \, h_1 \, h_2 \, x_3^4 - 20 \, d\gamma \, h_1 \, h_2 \, x_3^4 +$

$56 \, h_2^2 \, x_3^4 + 8 \, d\gamma \, h_2^2 \, x_3^4 + 14 \, x_1^2 \, x_3^4 + 2 \, d\gamma \, x_1^2 \, x_3^4 - 14 \, x_2^2 \, x_3^4 - 2 \, d\gamma \, x_2^2 \, x_3^4 - 14 \, x_3^6 - 2 \, d\gamma \, x_3^6 +$

$2520 \, h_1 \, x_2 \, x_3 \, y_1 + 1284 \, d\gamma \, h_1 \, x_2 \, x_3 \, y_1 + 216 \, d\gamma^2 \, h_1 \, x_2 \, x_3 \, y_1 + 12 \, d\gamma^3 \, h_1 \, x_2 \, x_3 \, y_1 - 168 \, h_1^3 \, x_2 \, x_3 \, y_1 -$

$24 \, d\gamma \, h_1^3 \, x_2 \, x_3 \, y_1 - 1260 \, h_2 \, x_2 \, x_3 \, y_1 - 642 \, d\gamma \, h_2 \, x_2 \, x_3 \, y_1 - 108 \, d\gamma^2 \, h_2 \, x_2 \, x_3 \, y_1 - 6 \, d\gamma^3 \, h_2 \, x_2 \, x_3 \, y_1 +$

$$1512\,i\,h_1 h_2 x_2 x_3 y_1 + 468\,i\,d\gamma\,h_1 h_2 x_2 x_3 y_1 + 36\,i\,d\gamma^2 h_1 h_2 x_2 x_3 y_1 + 252\,h_1^2 h_2 x_2 x_3 y_1 +$$

$$36\,d\gamma\,h_1^2 h_2 x_2 x_3 y_1 - 756\,i\,h_2^2 x_2 x_3 y_1 - 234\,i\,d\gamma\,h_2^2 x_2 x_3 y_1 - 18\,i\,d\gamma^2 h_2^2 x_2 x_3 y_1 -$$

$$252\,h_1 h_2^2 x_2 x_3 y_1 - 36\,d\gamma\,h_1 h_2^2 x_2 x_3 y_1 + 84\,h_2^3 x_2 x_3 y_1 + 12\,d\gamma\,h_2^3 x_2 x_3 y_1 - 168\,h_1 x_1^2 x_2 x_3 y_1 -$$

$$24\,d\gamma\,h_1 x_1^2 x_2 x_3 y_1 + 84\,h_2 x_1^2 x_2 x_3 y_1 + 12\,d\gamma\,h_2 x_1^2 x_2 x_3 y_1 - 756\,i\,x_2^3 x_3 y_1 - 234\,i\,d\gamma\,x_2^3 x_3 y_1 -$$

$$18\,i\,d\gamma^2 x_2^3 x_3 y_1 + 84\,h_1 x_2^3 x_3 y_1 + 12\,d\gamma\,h_1 x_2^3 x_3 y_1 + 84\,h_2 x_2^3 x_3 y_1 + 12\,d\gamma\,h_2 x_2^3 x_3 y_1 +$$

$$756\,i\,x_2 x_3^3 y_1 + 234\,i\,d\gamma\,x_2 x_3^3 y_1 + 18\,i\,d\gamma^2 x_2 x_3^3 y_1 + 84\,h_1 x_2 x_3^3 y_1 + 12\,d\gamma\,h_1 x_2 x_3^3 y_1 -$$

$$168\,h_2 x_2 x_3^3 y_1 - 24\,d\gamma\,h_2 x_2 x_3^3 y_1 - 8400\,i\,h_1 y_1^2 - 6380\,i\,d\gamma\,h_1 y_1^2 - 1790\,i\,d\gamma^2 h_1 y_1^2 -$$

$$220\,i\,d\gamma^3 h_1 y_1^2 - 10\,i\,d\gamma^4 h_1 y_1^2 - 672\,i\,h_1^3 y_1^2 - 208\,i\,d\gamma\,h_1^3 y_1^2 - 16\,i\,d\gamma^2 h_1^3 y_1^2 + 4200\,i\,h_2 y_1^2 +$$

$$3190\,i\,d\gamma\,h_2 y_1^2 + 895\,i\,d\gamma^2 h_2 y_1^2 + 110\,i\,d\gamma^3 h_2 y_1^2 + 5\,i\,d\gamma^4 h_2 y_1^2 + 5040\,h_1 h_2 y_1^2 + 2568\,d\gamma\,h_1 h_2 y_1^2 +$$

$$432\,d\gamma^2 h_1 h_2 y_1^2 + 24\,d\gamma^3 h_1 h_2 y_1^2 + 1008\,i\,h_1^2 h_2 y_1^2 + 312\,i\,d\gamma\,h_1^2 h_2 y_1^2 + 24\,i\,d\gamma^2 h_1^2 h_2 y_1^2 -$$

$$2520\,h_2^2 y_1^2 - 1284\,d\gamma\,h_2^2 y_1^2 - 216\,d\gamma^2 h_2^2 y_1^2 - 12\,d\gamma^3 h_2^2 y_1^2 + 252\,i\,h_1 h_2^2 y_1^2 + 78\,i\,d\gamma\,h_1 h_2^2 y_1^2 +$$

$$6\,i\,d\gamma^2 h_1 h_2^2 y_1^2 - 294\,i\,h_2^3 y_1^2 - 91\,i\,d\gamma\,h_2^3 y_1^2 - 7\,i\,d\gamma^2 h_2^3 y_1^2 - 672\,i\,h_1 x_1^2 y_1^2 - 208\,i\,d\gamma\,h_1 x_1^2 y_1^2 -$$

$$16\,i\,d\gamma^2 h_1 x_1^2 y_1^2 + 336\,i\,h_2 x_1^2 y_1^2 + 104\,i\,d\gamma\,h_2 x_1^2 y_1^2 + 8\,i\,d\gamma^2 h_2 x_1^2 y_1^2 - 1050\,x_2^2 y_1^2 - 535\,d\gamma\,x_2^2 y_1^2 -$$

$$90\,d\gamma^2 x_2^2 y_1^2 - 5\,d\gamma^3 x_2^2 y_1^2 - 420\,i\,h_1 x_2^2 y_1^2 - 130\,i\,d\gamma\,h_1 x_2^2 y_1^2 - 10\,i\,d\gamma^2 h_1 x_2^2 y_1^2 + 28\,h_1^2 x_2^2 y_1^2 +$$

$$4\,d\gamma\,h_1^2 x_2^2 y_1^2 - 294\,i\,h_2 x_2^2 y_1^2 - 91\,i\,d\gamma\,h_2 x_2^2 y_1^2 - 7\,i\,d\gamma^2 h_2 x_2^2 y_1^2 + 140\,h_1 h_2 x_2^2 y_1^2 + 20\,d\gamma\,h_1 h_2 x_2^2 y_1^2 -$$

$$14\,h_2^2 x_2^2 y_1^2 - 2\,d\gamma\,h_2^2 x_2^2 y_1^2 - 56\,x_1^2 x_2^2 y_1^2 - 8\,d\gamma\,x_1^2 x_2^2 y_1^2 - 14\,x_2^4 y_1^2 - 2\,d\gamma\,x_2^4 y_1^2 + 1050\,x_3^2 y_1^2 +$$

$$535\,d\gamma\,x_3^2 y_1^2 + 90\,d\gamma^2 x_3^2 y_1^2 + 5\,d\gamma^3 x_3^2 y_1^2 - 420\,i\,h_1 x_3^2 y_1^2 - 130\,i\,d\gamma\,h_1 x_3^2 y_1^2 - 10\,i\,d\gamma^2 h_1 x_3^2 y_1^2 -$$

$$28\,h_1^2 x_3^2 y_1^2 - 4\,d\gamma\,h_1^2 x_3^2 y_1^2 + 714\,i\,h_2 x_3^2 y_1^2 + 221\,i\,d\gamma\,h_2 x_3^2 y_1^2 + 17\,i\,d\gamma^2 h_2 x_3^2 y_1^2 + 196\,h_1 h_2 x_3^2 y_1^2 +$$

$$28\,d\gamma\,h_1 h_2 x_3^2 y_1^2 - 154\,h_2^2 x_3^2 y_1^2 - 22\,d\gamma\,h_2^2 x_3^2 y_1^2 + 56\,x_1^2 x_3^2 y_1^2 + 8\,d\gamma\,x_1^2 x_3^2 y_1^2 + 14\,x_3^4 y_1^2 + 2\,d\gamma\,x_3^4 y_1^2 -$$

$$168\,h_1 x_2 x_3 y_1^3 - 24\,d\gamma\,h_1 x_2 x_3 y_1^3 + 84\,h_2 x_2 x_3 y_1^3 + 12\,d\gamma\,h_2 x_2 x_3 y_1^3 - 336\,i\,h_1 y_1^4 - 104\,i\,d\gamma\,h_1 y_1^4 -$$

$$8\,i\,d\gamma^2 h_1 y_1^4 + 168\,i\,h_2 y_1^4 + 52\,i\,d\gamma\,h_2 y_1^4 + 4\,i\,d\gamma^2 h_2 y_1^4 - 28\,x_2^2 y_1^4 - 4\,d\gamma\,x_2^2 y_1^4 + 28\,x_3^2 y_1^4 +$$

$$4\,d\gamma\,x_3^2 y_1^4 + 2520\,h_1 x_1 x_3 y_2 + 1284\,d\gamma\,h_1 x_1 x_3 y_2 + 216\,d\gamma^2 h_1 x_1 x_3 y_2 + 12\,d\gamma^3 h_1 x_1 x_3 y_2 -$$

$$168\,h_1^3 x_1 x_3 y_2 - 24\,d\gamma\,h_1^3 x_1 x_3 y_2 - 1260\,h_2 x_1 x_3 y_2 - 642\,d\gamma\,h_2 x_1 x_3 y_2 - 108\,d\gamma^2 h_2 x_1 x_3 y_2 -$$

$$6\,d\gamma^3 h_2 x_1 x_3 y_2 + 1512\,i\,h_1 h_2 x_1 x_3 y_2 + 468\,i\,d\gamma\,h_1 h_2 x_1 x_3 y_2 + 36\,i\,d\gamma^2 h_1 h_2 x_1 x_3 y_2 +$$

$$252\,h_1^2 h_2 x_1 x_3 y_2 + 36\,d\gamma\,h_1^2 h_2 x_1 x_3 y_2 - 756\,i\,h_2^2 x_1 x_3 y_2 - 234\,i\,d\gamma\,h_2^2 x_1 x_3 y_2 - 18\,i\,d\gamma^2 h_2^2 x_1 x_3 y_2 -$$

$$252\,h_1 h_2^2 x_1 x_3 y_2 - 36\,d\gamma\,h_1 h_2^2 x_1 x_3 y_2 + 84\,h_2^3 x_1 x_3 y_2 + 12\,d\gamma\,h_2^3 x_1 x_3 y_2 - 168\,h_1 x_1^3 x_3 y_2 -$$

$$24\,d\gamma\,h_1 x_1^3 x_3 y_2 + 84\,h_2 x_1^3 x_3 y_2 + 12\,d\gamma\,h_2 x_1^3 x_3 y_2 - 756\,i\,x_1 x_2^2 x_3 y_2 - 234\,i\,d\gamma\,x_1 x_2^2 x_3 y_2 -$$

$$18\,i\,d\gamma^2 x_1 x_2^2 x_3 y_2 + 84\,h_1 x_1 x_2^2 x_3 y_2 + 12\,d\gamma\,h_1 x_1 x_2^2 x_3 y_2 + 84\,h_2 x_1 x_2^2 x_3 y_2 + 12\,d\gamma\,h_2 x_1 x_2^2 x_3 y_2 +$$

$$756\,i\,x_1 x_3^3 y_2 + 234\,i\,d\gamma\,x_1 x_3^3 y_2 + 18\,i\,d\gamma^2 x_1 x_3^3 y_2 + 84\,h_1 x_1 x_3^3 y_2 + 12\,d\gamma\,h_1 x_1 x_3^3 y_2 -$$

$$168\,h_2 x_1 x_3^3 y_2 - 24\,d\gamma\,h_2 x_1 x_3^3 y_2 - 168\,h_1 x_1 x_3 y_1^2 y_2 - 24\,d\gamma\,h_1 x_1 x_3 y_1^2 y_2 + 84\,h_2 x_1 x_3 y_1^2 y_2 +$$

$$12\,d\gamma\,h_2 x_1 x_3 y_1^2 y_2 - 2520\,y_2^2 - 2754\,d\gamma\,y_2^2 - 1175\,d\gamma^2 y_2^2 - 245\,d\gamma^3 y_2^2 - 25\,d\gamma^4 y_2^2 - d\gamma^5 y_2^2 -$$

$$3360\,i\,h_1 y_2^2 - 2552\,i\,d\gamma\,h_1 y_2^2 - 716\,i\,d\gamma^2 h_1 y_2^2 - 88\,i\,d\gamma^3 h_1 y_2^2 - 4\,i\,d\gamma^4 h_1 y_2^2 - 2310\,h_1^2 y_2^2 -$$

$$1177\,d\gamma\,h_1^2 y_2^2 - 198\,d\gamma^2 h_1^2 y_2^2 - 11\,d\gamma^3 h_1^2 y_2^2 - 420\,i\,h_1^3 y_2^2 - 130\,i\,d\gamma\,h_1^3 y_2^2 - 10\,i\,d\gamma^2 h_1^3 y_2^2 +$$

$$56\,h_1^4 y_2^2 + 8\,d\gamma\,h_1^4 y_2^2 - 840\,i\,h_2 y_2^2 - 638\,i\,d\gamma\,h_2 y_2^2 - 179\,i\,d\gamma^2 h_2 y_2^2 - 22\,i\,d\gamma^3 h_2 y_2^2 -$$

$$i\,d\gamma^4 h_2 y_2^2 + 2940\,h_1 h_2 y_2^2 + 1498\,d\gamma\,h_1 h_2 y_2^2 + 252\,d\gamma^2 h_1 h_2 y_2^2 + 14\,d\gamma^3 h_1 h_2 y_2^2 - 630\,i\,h_1^2 h_2 y_2^2 -$$

$$195\,i\,d\gamma\,h_1^2 h_2 y_2^2 - 15\,i\,d\gamma^2 h_1^2 h_2 y_2^2 + 56\,h_1^3 h_2 y_2^2 + 8\,d\gamma\,h_1^3 h_2 y_2^2 - 420\,h_2^2 y_2^2 - 214\,d\gamma\,h_2^2 y_2^2 -$$

$$36\,d\gamma^2 h_2^2 y_2^2 - 2\,d\gamma^3 h_2^2 y_2^2 + 756\,i\,h_1 h_2^2 y_2^2 + 234\,i\,d\gamma\,h_1 h_2^2 y_2^2 + 18\,i\,d\gamma^2 h_1 h_2^2 y_2^2 - 42\,h_1^2 h_2^2 y_2^2 -$$

$$6\,d\gamma\,h_1^2 h_2^2 y_2^2 - 168\,i\,h_2^3 y_2^2 - 52\,i\,d\gamma\,h_2^3 y_2^2 - 4\,i\,d\gamma^2 h_2^3 y_2^2 - 28\,h_1 h_2^3 y_2^2 - 4\,d\gamma\,h_1 h_2^3 y_2^2 + 14\,h_2^4 y_2^2 +$$

$$2\,d\gamma\,h_2^4 y_2^2 - 1050\,x_1^2 y_2^2 - 535\,d\gamma\,x_1^2 y_2^2 - 90\,d\gamma^2 x_1^2 y_2^2 - 5\,d\gamma^3 x_1^2 y_2^2 - 420\,i\,h_1 x_1^2 y_2^2 - 130\,i\,d\gamma\,h_1 x_1^2 y_2^2 -$$

$$10\,i\,d\gamma^2 h_1 x_1^2 y_2^2 + 28\,h_1^2 x_1^2 y_2^2 + 4\,d\gamma\,h_1^2 x_1^2 y_2^2 - 294\,i\,h_2 x_1^2 y_2^2 - 91\,i\,d\gamma\,h_2 x_1^2 y_2^2 - 7\,i\,d\gamma^2 h_2 x_1^2 y_2^2 +$$

$$140\,h_1 h_2 x_1^2 y_2^2 + 20\,d\gamma\,h_1 h_2 x_1^2 y_2^2 - 14\,h_2^2 x_1^2 y_2^2 - 2\,d\gamma\,h_2^2 x_1^2 y_2^2 - 28\,x_1^4 y_2^2 - 4\,d\gamma\,x_1^4 y_2^2 + 420\,x_2^2 y_2^2 +$$

$$214\,d\gamma\,x_2^2 y_2^2 + 36\,d\gamma^2 x_2^2 y_2^2 + 2\,d\gamma^3 x_2^2 y_2^2 + 588\,i\,h_1 x_2^2 y_2^2 + 182\,i\,d\gamma\,h_1 x_2^2 y_2^2 + 14\,i\,d\gamma^2 h_1 x_2^2 y_2^2 -$$

$$112\,h_1^2 x_2^2 y_2^2 - 16\,d\gamma\,h_1^2 x_2^2 y_2^2 - 168\,i\,h_2 x_2^2 y_2^2 - 52\,i\,d\gamma\,h_2 x_2^2 y_2^2 - 4\,i\,d\gamma^2 h_2 x_2^2 y_2^2 - 56\,h_1 h_2 x_2^2 y_2^2 -$$

$$8\,d\gamma\,h_1 h_2 x_2^2 y_2^2 + 56\,h_2^2 x_2^2 y_2^2 + 8\,d\gamma\,h_2^2 x_2^2 y_2^2 - 28\,x_1^2 x_2^2 y_2^2 - 4\,d\gamma\,x_1^2 x_2^2 y_2^2 + 42\,x_2^4 y_2^2 + 6\,d\gamma\,x_2^4 y_2^2 -$$

$$924\,i\,h_1 x_3^2 y_2^2 - 286\,i\,d\gamma\,h_1 x_3^2 y_2^2 - 22\,i\,d\gamma^2 h_1 x_3^2 y_2^2 + 462\,i\,h_2 x_3^2 y_2^2 + 143\,i\,d\gamma\,h_2 x_3^2 y_2^2 +$$

$$11\,i\,d\gamma^2 h_2 x_3^2 y_2^2 + 84\,h_1 h_2 x_3^2 y_2^2 + 12\,d\gamma\,h_1 h_2 x_3^2 y_2^2 - 42\,h_2^2 x_3^2 y_2^2 - 6\,d\gamma\,h_2^2 x_3^2 y_2^2 + 28\,x_2^2 x_3^2 y_2^2 +$$

$$4\,d\gamma\,x_2^2 x_3^2 y_2^2 - 14\,x_3^4 y_2^2 - 2\,d\gamma\,x_3^4 y_2^2 - 756\,i\,x_2 x_3 y_1 y_2^2 - 234\,i\,d\gamma\,x_2 x_3 y_1 y_2^2 - 18\,i\,d\gamma^2 x_2 x_3 y_1 y_2^2 +$$

$$84\, h_1 x_2 x_3 y_1 y_2^2 + 12\, d\gamma\, h_1 x_2 x_3 y_1 y_2^2 + 84\, h_2 x_2 x_3 y_1 y_2^2 + 12\, d\gamma\, h_2 x_2 x_3 y_1 y_2^2 - 1050\, y_1^2 y_2^2 -$$

$$535\, d\gamma\, y_1^2 y_2^2 - 90\, d\gamma^2\, y_1^2 y_2^2 - 5\, d\gamma^3\, y_1^2 y_2^2 - 420\, i\, h_1 y_1^2 y_2^2 - 130\, i\, d\gamma\, h_1 y_1^2 y_2^2 - 10\, i\, d\gamma^2\, h_1 y_1^2 y_2^2 +$$

$$28\, h_1^2 y_1^2 y_2^2 + 4\, d\gamma\, h_1^2 y_1^2 y_2^2 - 294\, i\, h_2 y_1^2 y_2^2 - 91\, i\, d\gamma\, h_2 y_1^2 y_2^2 - 7\, i\, d\gamma^2\, h_2 y_1^2 y_2^2 + 140\, h_1 h_2 y_1^2 y_2^2 +$$

$$20\, d\gamma\, h_1 h_2 y_1^2 y_2^2 - 14\, h_2^2 y_1^2 y_2^2 - 2\, d\gamma\, h_2^2 y_1^2 y_2^2 - 56\, x_1^2 y_1^2 y_2^2 - 8\, d\gamma\, x_1^2 y_1^2 y_2^2 - 28\, x_2^2 y_1^2 y_2^2 -$$

$$4\, d\gamma\, x_2^2 y_1^2 y_2^2 - 28\, y_1^4 y_2^2 - 4\, d\gamma\, y_1^4 y_2^2 - 756\, i\, x_1 x_3 y_2^3 - 234\, i\, d\gamma\, x_1 x_3 y_2^3 - 18\, i\, d\gamma^2\, x_1 x_3 y_2^3 +$$

$$84\, h_1 x_1 x_3 y_2^3 + 12\, d\gamma\, h_1 x_1 x_3 y_2^3 + 84\, h_2 x_1 x_3 y_2^3 + 12\, d\gamma\, h_2 x_1 x_3 y_2^3 + 210\, y_2^4 + 107\, d\gamma\, y_2^4 +$$

$$18\, d\gamma^2\, y_2^4 + d\gamma^3\, y_2^4 + 294\, i\, h_1 y_2^4 + 91\, i\, d\gamma\, h_1 y_2^4 + 7\, i\, d\gamma^2\, h_1 y_2^4 - 56\, h_1^2 y_2^4 - 8\, d\gamma\, h_1^2 y_2^4 - 84\, i\, h_2 y_2^4 -$$

$$26\, i\, d\gamma\, h_2 y_2^4 - 2\, i\, d\gamma^2\, h_2 y_2^4 - 28\, h_1 h_2 y_2^4 - 4\, d\gamma\, h_1 h_2 y_2^4 + 28\, h_2^2 y_2^4 + 4\, d\gamma\, h_2^2 y_2^4 - 14\, x_1^2 y_2^4 -$$

$$2\, d\gamma\, x_1^2 y_2^4 + 42\, x_2^2 y_2^4 + 6\, d\gamma\, x_2^2 y_2^4 + 14\, x_3^2 y_2^4 + 2\, d\gamma\, x_3^2 y_2^4 - 14\, y_1^2 y_2^4 - 2\, d\gamma\, y_1^2 y_2^4 + 14\, y_2^6 + 2\, d\gamma\, y_2^6 -$$

$$2520\, h_1 x_1 x_2 y_3 - 1284\, d\gamma\, h_1 x_1 x_2 y_3 - 216\, d\gamma^2\, h_1 x_1 x_2 y_3 - 12\, d\gamma^3\, h_1 x_1 x_2 y_3 + 168\, h_1^3 x_1 x_2 y_3 +$$

$$24\, d\gamma\, h_1^3 x_1 x_2 y_3 + 1260\, h_2 x_1 x_2 y_3 + 642\, d\gamma\, h_2 x_1 x_2 y_3 + 108\, d\gamma^2\, h_2 x_1 x_2 y_3 + 6\, d\gamma^3\, h_2 x_1 x_2 y_3 -$$

$$1512\, i\, h_1 h_2 x_1 x_2 y_3 - 468\, i\, d\gamma\, h_1 h_2 x_1 x_2 y_3 - 36\, i\, d\gamma^2\, h_1 h_2 x_1 x_2 y_3 - 252\, h_1^2 h_2 x_1 x_2 y_3 -$$

$$36\, d\gamma\, h_1^2 h_2 x_1 x_2 y_3 + 756\, i\, h_2^2 x_1 x_2 y_3 + 234\, i\, d\gamma\, h_2^2 x_1 x_2 y_3 + 18\, i\, d\gamma^2\, h_2^2 x_1 x_2 y_3 +$$

$$252\, h_1 h_2^2 x_1 x_2 y_3 + 36\, d\gamma\, h_1 h_2^2 x_1 x_2 y_3 - 84\, h_2^3 x_1 x_2 y_3 - 12\, d\gamma\, h_2^3 x_1 x_2 y_3 + 168\, h_1 x_1^3 x_2 y_3 +$$

$$24\, d\gamma\, h_1 x_1^3 x_2 y_3 - 84\, h_2 x_1^3 x_2 y_3 - 12\, d\gamma\, h_2 x_1^3 x_2 y_3 + 756\, i\, x_1 x_2^3 y_3 + 234\, i\, d\gamma\, x_1 x_2^3 y_3 +$$

$$18\, i\, d\gamma^2\, x_1 x_2^3 y_3 - 84\, h_1 x_1 x_2^3 y_3 - 12\, d\gamma\, h_1 x_1 x_2^3 y_3 - 84\, h_2 x_1 x_2^3 y_3 - 12\, d\gamma\, h_2 x_1 x_2^3 y_3 -$$

$$756\, i\, x_1 x_2 x_3^2 y_3 - 234\, i\, d\gamma\, x_1 x_2 x_3^2 y_3 - 18\, i\, d\gamma^2\, x_1 x_2 x_3^2 y_3 - 84\, h_1 x_1 x_2 x_3^2 y_3 - 12\, d\gamma\, h_1 x_1 x_2 x_3^2 y_3 +$$

$$168\, h_2 x_1 x_2 x_3^2 y_3 + 24\, d\gamma\, h_2 x_1 x_2 x_3^2 y_3 + 168\, h_1 x_1 x_2 y_1^2 y_3 + 24\, d\gamma\, h_1 x_1 x_2 y_1^2 y_3 - 84\, h_2 x_1 x_2 y_1^2 y_3 -$$

$$12\, d\gamma\, h_2 x_1 x_2 y_1^2 y_3 + 2520\, h_1 y_1 y_2 y_3 + 1284\, d\gamma\, h_1 y_1 y_2 y_3 + 216\, d\gamma^2\, h_1 y_1 y_2 y_3 + 12\, d\gamma^3\, h_1 y_1 y_2 y_3 -$$

$$168\, h_1^3 y_1 y_2 y_3 - 24\, d\gamma\, h_1^3 y_1 y_2 y_3 - 1260\, h_2 y_1 y_2 y_3 - 642\, d\gamma\, h_2 y_1 y_2 y_3 - 108\, d\gamma^2\, h_2 y_1 y_2 y_3 -$$

$$6\, d\gamma^3\, h_2 y_1 y_2 y_3 + 1512\, i\, h_1 h_2 y_1 y_2 y_3 + 468\, i\, d\gamma\, h_1 h_2 y_1 y_2 y_3 + 36\, i\, d\gamma^2\, h_1 h_2 y_1 y_2 y_3 +$$

$$252\, h_1^2 h_2 y_1 y_2 y_3 + 36\, d\gamma\, h_1^2 h_2 y_1 y_2 y_3 - 756\, i\, h_2^2 y_1 y_2 y_3 - 234\, i\, d\gamma\, h_2^2 y_1 y_2 y_3 -$$

$$18\, i\, d\gamma^2\, h_2^2 y_1 y_2 y_3 - 252\, h_1 h_2^2 y_1 y_2 y_3 - 36\, d\gamma\, h_1 h_2^2 y_1 y_2 y_3 + 84\, h_2^3 y_1 y_2 y_3 + 12\, d\gamma\, h_2^3 y_1 y_2 y_3 -$$

$$168\, h_1 x_1^2 y_1 y_2 y_3 - 24\, d\gamma\, h_1 x_1^2 y_1 y_2 y_3 + 84\, h_2 x_1^2 y_1 y_2 y_3 + 12\, d\gamma\, h_2 x_1^2 y_1 y_2 y_3 - 756\, i\, x_2^2 y_1 y_2 y_3 -$$

$$234\, i\, d\gamma\, x_2^2 y_1 y_2 y_3 - 18\, i\, d\gamma^2\, x_2^2 y_1 y_2 y_3 + 84\, h_1 x_2^2 y_1 y_2 y_3 + 12\, d\gamma\, h_1 x_2^2 y_1 y_2 y_3 + 84\, h_2 x_2^2 y_1 y_2 y_3 +$$

$$12\, d\gamma\, h_2 x_2^2 y_1 y_2 y_3 + 756\, i\, x_3^2 y_1 y_2 y_3 + 234\, i\, d\gamma\, x_3^2 y_1 y_2 y_3 + 18\, i\, d\gamma^2\, x_3^2 y_1 y_2 y_3 + 84\, h_1 x_3^2 y_1 y_2 y_3 +$$

$$12\, d\gamma\, h_1 x_3^2 y_1 y_2 y_3 - 168\, h_2 x_3^2 y_1 y_2 y_3 - 24\, d\gamma\, h_2 x_3^2 y_1 y_2 y_3 - 168\, h_1 y_1^3 y_2 y_3 - 24\, d\gamma\, h_1 y_1^3 y_2 y_3 +$$

$$84\, h_2 y_1^3 y_2 y_3 + 12\, d\gamma\, h_2 y_1^3 y_2 y_3 + 756\, i\, x_1 x_2 y_2^2 y_3 + 234\, i\, d\gamma\, x_1 x_2 y_2^2 y_3 + 18\, i\, d\gamma^2\, x_1 x_2 y_2^2 y_3 -$$

$$84\, h_1 x_1 x_2 y_2^2 y_3 - 12\, d\gamma\, h_1 x_1 x_2 y_2^2 y_3 - 84\, h_2 x_1 x_2 y_2^2 y_3 - 12\, d\gamma\, h_2 x_1 x_2 y_2^2 y_3 - 756\, i\, y_1 y_2^3 y_3 -$$

$$234\, i\, d\gamma\, y_1 y_2^3 y_3 - 18\, i\, d\gamma^2\, y_1 y_2^3 y_3 + 84\, h_1 y_1 y_2^3 y_3 + 12\, d\gamma\, h_1 y_1 y_2^3 y_3 + 84\, h_2 y_1 y_2^3 y_3 +$$

$$12\, d\gamma\, h_2 y_1 y_2^3 y_3 + 2520\, y_3^2 + 2754\, d\gamma\, y_3^2 + 1175\, d\gamma^2\, y_3^2 + 245\, d\gamma^3\, y_3^2 + 25\, d\gamma^4\, y_3^2 + d\gamma^5\, y_3^2 -$$

$$3360\, i\, h_1 y_3^2 - 2552\, i\, d\gamma\, h_1 y_3^2 - 716\, i\, d\gamma^2\, h_1 y_3^2 - 88\, i\, d\gamma^3\, h_1 y_3^2 - 4\, i\, d\gamma^4\, h_1 y_3^2 + 2310\, h_1^2 y_3^2 +$$

$$1177\, d\gamma\, h_1^2 y_3^2 + 198\, d\gamma^2\, h_1^2 y_3^2 + 11\, d\gamma^3\, h_1^2 y_3^2 - 420\, i\, h_1^3 y_3^2 - 130\, i\, d\gamma\, h_1^3 y_3^2 - 10\, i\, d\gamma^2\, h_1^3 y_3^2 -$$

$$56\, h_1^4 y_3^2 - 8\, d\gamma\, h_1^4 y_3^2 + 4200\, i\, h_2 y_3^2 + 3190\, i\, d\gamma\, h_2 y_3^2 + 895\, i\, d\gamma^2\, h_2 y_3^2 + 110\, i\, d\gamma^3\, h_2 y_3^2 +$$

$$5\, i\, d\gamma^4\, h_2 y_3^2 - 1680\, h_1 h_2 y_3^2 - 856\, d\gamma\, h_1 h_2 y_3^2 - 144\, d\gamma^2\, h_1 h_2 y_3^2 - 8\, d\gamma^3\, h_1 h_2 y_3^2 + 1890\, i\, h_1^2 h_2 y_3^2 +$$

$$585\, i\, d\gamma\, h_1^2 h_2 y_3^2 + 45\, i\, d\gamma^2\, h_1^2 h_2 y_3^2 + 280\, h_1^3 h_2 y_3^2 + 40\, d\gamma\, h_1^3 h_2 y_3^2 - 210\, h_2^2 y_3^2 - 107\, d\gamma\, h_2^2 y_3^2 -$$

$$18\, d\gamma^2\, h_2^2 y_3^2 - d\gamma^3\, h_2^2 y_3^2 - 1764\, i\, h_1 h_2^2 y_3^2 - 546\, i\, d\gamma\, h_1 h_2^2 y_3^2 - 42\, i\, d\gamma^2\, h_1 h_2^2 y_3^2 - 462\, h_1^2 h_2^2 y_3^2 -$$

$$66\, d\gamma\, h_1^2 h_2^2 y_3^2 + 462\, i\, h_2^3 y_3^2 + 143\, i\, d\gamma\, h_2^3 y_3^2 + 11\, i\, d\gamma^2\, h_2^3 y_3^2 + 280\, h_1 h_2^3 y_3^2 + 40\, d\gamma\, h_1 h_2^3 y_3^2 -$$

$$56\, h_2^4 y_3^2 - 8\, d\gamma\, h_2^4 y_3^2 + 1050\, x_1^2 y_3^2 + 535\, d\gamma\, x_1^2 y_3^2 + 90\, d\gamma^2\, x_1^2 y_3^2 + 5\, d\gamma^3\, x_1^2 y_3^2 - 420\, i\, h_1 x_1^2 y_3^2 -$$

$$130\, i\, d\gamma\, h_1 x_1^2 y_3^2 - 10\, i\, d\gamma^2\, h_1 x_1^2 y_3^2 - 28\, h_1^2 x_1^2 y_3^2 - 4\, d\gamma\, h_1^2 x_1^2 y_3^2 + 714\, i\, h_2 x_1^2 y_3^2 +$$

$$221\, i\, d\gamma\, h_2 x_1^2 y_3^2 + 17\, i\, d\gamma^2\, h_2 x_1^2 y_3^2 + 196\, h_1 h_2 x_1^2 y_3^2 + 28\, d\gamma\, h_1 h_2 x_1^2 y_3^2 - 154\, h_2^2 x_1^2 y_3^2 -$$

$$22\, d\gamma\, h_2^2 x_1^2 y_3^2 + 28\, x_1^4 y_3^2 + 4\, d\gamma\, x_1^4 y_3^2 - 924\, i\, h_1 x_2^2 y_3^2 - 286\, i\, d\gamma\, h_1 x_2^2 y_3^2 - 22\, i\, d\gamma^2\, h_1 x_2^2 y_3^2 +$$

$$462\, i\, h_2 x_2^2 y_3^2 + 143\, i\, d\gamma\, h_2 x_2^2 y_3^2 + 11\, i\, d\gamma^2\, h_2 x_2^2 y_3^2 + 84\, h_1 h_2 x_2^2 y_3^2 + 12\, d\gamma\, h_1 h_2 x_2^2 y_3^2 -$$

$$42\, h_2^2 x_2^2 y_3^2 - 6\, d\gamma\, h_2^2 x_2^2 y_3^2 + 14\, x_2^4 y_3^2 + 2\, d\gamma\, x_2^4 y_3^2 - 420\, x_3^2 y_3^2 - 214\, d\gamma\, x_3^2 y_3^2 - 36\, d\gamma^2\, x_3^2 y_3^2 -$$

$$2\, d\gamma^3\, x_3^2 y_3^2 + 588\, i\, h_1 x_3^2 y_3^2 + 182\, i\, d\gamma\, h_1 x_3^2 y_3^2 + 14\, i\, d\gamma^2\, h_1 x_3^2 y_3^2 + 112\, h_1^2 x_3^2 y_3^2 + 16\, d\gamma\, h_1^2 x_3^2 y_3^2 -$$

$$420\, i\, h_2 x_3^2 y_3^2 - 130\, i\, d\gamma\, h_2 x_3^2 y_3^2 - 10\, i\, d\gamma^2\, h_2 x_3^2 y_3^2 - 280\, h_1 h_2 x_3^2 y_3^2 - 40\, d\gamma\, h_1 h_2 x_3^2 y_3^2 +$$

$$112\, h_2^2 x_3^2 y_3^2 + 16\, d\gamma\, h_2^2 x_3^2 y_3^2 + 28\, x_1^2 x_3^2 y_3^2 + 4\, d\gamma\, x_1^2 x_3^2 y_3^2 - 28\, x_2^2 x_3^2 y_3^2 - 4\, d\gamma\, x_2^2 x_3^2 y_3^2 - 42\, x_3^4 y_3^2 -$$

$6\, d\gamma\, x_3^4\, y_3^2 + 756\, \mathbb{i}\, x_2\, x_3\, y_1\, y_3^2 + 234\, \mathbb{i}\, d\gamma\, x_2\, x_3\, y_1\, y_3^2 + 18\, \mathbb{i}\, d\gamma^2\, x_2\, x_3\, y_1\, y_3^2 + 84\, h_1\, x_2\, x_3\, y_1\, y_3^2 +$

$12\, d\gamma\, h_1\, x_2\, x_3\, y_1\, y_3^2 - 168\, h_2\, x_2\, x_3\, y_1\, y_3^2 - 24\, d\gamma\, h_2\, x_2\, x_3\, y_1\, y_3^2 + 1050\, y_1^2\, y_3^2 + 535\, d\gamma\, y_1^2\, y_3^2 + 90\, d\gamma^2\, y_1^2\, y_3^2 +$

$5\, d\gamma^3\, y_1^2\, y_3^2 - 420\, \mathbb{i}\, h_1\, y_1^2\, y_3^2 - 130\, \mathbb{i}\, d\gamma\, h_1\, y_1^2\, y_3^2 - 10\, \mathbb{i}\, d\gamma^2\, h_1\, y_1^2\, y_3^2 - 28\, h_1^2\, y_1^2\, y_3^2 - 4\, d\gamma\, h_1^2\, y_1^2\, y_3^2 +$

$714\, \mathbb{i}\, h_2\, y_1^2\, y_3^2 + 221\, \mathbb{i}\, d\gamma\, h_2\, y_1^2\, y_3^2 + 17\, \mathbb{i}\, d\gamma^2\, h_2\, y_1^2\, y_3^2 + 196\, h_1\, h_2\, y_1^2\, y_3^2 + 28\, d\gamma\, h_1\, h_2\, y_1^2\, y_3^2 -$

$154\, h_2^2\, y_1^2\, y_3^2 - 22\, d\gamma\, h_2^2\, y_1^2\, y_3^2 + 56\, x_1^2\, y_1^2\, y_3^2 + 8\, d\gamma\, x_1^2\, y_1^2\, y_3^2 + 28\, x_3^2\, y_1^2\, y_3^2 + 4\, d\gamma\, x_3^2\, y_1^2\, y_3^2 + 28\, y_1^4\, y_3^2 +$

$4\, d\gamma\, y_1^4\, y_3^2 + 756\, \mathbb{i}\, x_1\, x_3\, y_2\, y_3^2 + 234\, \mathbb{i}\, d\gamma\, x_1\, x_3\, y_2\, y_3^2 + 18\, \mathbb{i}\, d\gamma^2\, x_1\, x_3\, y_2\, y_3^2 + 84\, h_1\, x_1\, x_3\, y_2\, y_3^2 +$

$12\, d\gamma\, h_1\, x_1\, x_3\, y_2\, y_3^2 - 168\, h_2\, x_1\, x_3\, y_2\, y_3^2 - 24\, d\gamma\, h_2\, x_1\, x_3\, y_2\, y_3^2 - 924\, \mathbb{i}\, h_1\, y_2^2\, y_3^2 - 286\, \mathbb{i}\, d\gamma\, h_1\, y_2^2\, y_3^2 -$

$22\, \mathbb{i}\, d\gamma^2\, h_1\, y_2^2\, y_3^2 + 462\, \mathbb{i}\, h_2\, y_2^2\, y_3^2 + 143\, \mathbb{i}\, d\gamma\, h_2\, y_2^2\, y_3^2 + 11\, \mathbb{i}\, d\gamma^2\, h_2\, y_2^2\, y_3^2 + 84\, h_1\, h_2\, y_2^2\, y_3^2 +$

$12\, d\gamma\, h_1\, h_2\, y_2^2\, y_3^2 - 42\, h_2^2\, y_2^2\, y_3^2 - 6\, d\gamma\, h_2^2\, y_2^2\, y_3^2 + 28\, x_2^2\, y_2^2\, y_3^2 + 4\, d\gamma\, x_2^2\, y_2^2\, y_3^2 - 28\, x_3^2\, y_2^2\, y_3^2 - 4\, d\gamma\, x_3^2\, y_2^2\, y_3^2 +$

$14\, y_2^4\, y_3^2 + 2\, d\gamma\, y_2^4\, y_3^2 - 756\, \mathbb{i}\, x_1\, x_2\, y_3^3 - 234\, \mathbb{i}\, d\gamma\, x_1\, x_2\, y_3^3 - 18\, \mathbb{i}\, d\gamma^2\, x_1\, x_2\, y_3^3 - 84\, h_1\, x_1\, x_2\, y_3^3 -$

$12\, d\gamma\, h_1\, x_1\, x_2\, y_3^3 + 168\, h_2\, x_1\, x_2\, y_3^3 + 24\, d\gamma\, h_2\, x_1\, x_2\, y_3^3 + 756\, \mathbb{i}\, y_1\, y_2\, y_3^3 + 234\, \mathbb{i}\, d\gamma\, y_1\, y_2\, y_3^3 +$

$18\, \mathbb{i}\, d\gamma^2\, y_1\, y_2\, y_3^3 + 84\, h_1\, y_1\, y_2\, y_3^3 + 12\, d\gamma\, h_1\, y_1\, y_2\, y_3^3 - 168\, h_2\, y_1\, y_2\, y_3^3 - 24\, d\gamma\, h_2\, y_1\, y_2\, y_3^3 -$

$210\, y_3^4 - 107\, d\gamma\, y_3^4 - 18\, d\gamma^2\, y_3^4 - d\gamma^3\, y_3^4 + 294\, \mathbb{i}\, h_1\, y_3^4 + 91\, \mathbb{i}\, d\gamma\, h_1\, y_3^4 + 7\, \mathbb{i}\, d\gamma^2\, h_1\, y_3^4 + 56\, h_1^2\, y_3^4 +$

$8\, d\gamma\, h_1^2\, y_3^4 - 210\, \mathbb{i}\, h_2\, y_3^4 - 65\, \mathbb{i}\, d\gamma\, h_2\, y_3^4 - 5\, \mathbb{i}\, d\gamma^2\, h_2\, y_3^4 - 140\, h_1\, h_2\, y_3^4 - 20\, d\gamma\, h_1\, h_2\, y_3^4 +$

$56\, h_2^2\, y_3^4 + 8\, d\gamma\, h_2^2\, y_3^4 + 14\, x_1^2\, y_3^4 + 2\, d\gamma\, x_1^2\, y_3^4 - 14\, x_2^2\, y_3^4 - 2\, d\gamma\, x_2^2\, y_3^4 - 42\, x_3^2\, y_3^4 - 6\, d\gamma\, x_3^2\, y_3^4 +$

$14\, y_1^2\, y_3^4 + 2\, d\gamma\, y_1^2\, y_3^4 - 14\, y_2^2\, y_3^4 - 2\, d\gamma\, y_2^2\, y_3^4 - 14\, y_3^6 - 2\, d\gamma\, y_3^6 + (A[\![1, 1]\!] - A[\![2, 2]\!])$ // Expand

Out[•]= 0

In[•]:= **A[\![1, 1]\!] – A[\![2, 2]\!] // Expand**

Out[•]= $10\,080\, \mathbb{i}\, h_1 + 16\,056\, \mathbb{i}\, d\gamma\, h_1 + 10\,208\, \mathbb{i}\, d\gamma^2\, h_1 + 3330\, \mathbb{i}\, d\gamma^3\, h_1 + 590\, \mathbb{i}\, d\gamma^4\, h_1 + 54\, \mathbb{i}\, d\gamma^5\, h_1 + 2\, \mathbb{i}\, d\gamma^6\, h_1 +$

$8400\, \mathbb{i}\, h_1^3 + 6380\, \mathbb{i}\, d\gamma\, h_1^3 + 1790\, \mathbb{i}\, d\gamma^2\, h_1^3 + 220\, \mathbb{i}\, d\gamma^3\, h_1^3 + 10\, \mathbb{i}\, d\gamma^4\, h_1^3 + 336\, \mathbb{i}\, h_1^5 + 104\, \mathbb{i}\, d\gamma\, h_1^5 +$

$8\, \mathbb{i}\, d\gamma^2\, h_1^5 - 5040\, \mathbb{i}\, h_2 - 8028\, \mathbb{i}\, d\gamma\, h_2 - 5104\, \mathbb{i}\, d\gamma^2\, h_2 - 1665\, \mathbb{i}\, d\gamma^3\, h_2 - 295\, \mathbb{i}\, d\gamma^4\, h_2 - 27\, \mathbb{i}\, d\gamma^5\, h_2 -$

$\mathbb{i}\, d\gamma^6\, h_2 - 15\,120\, h_1\, h_2 - 16\,524\, d\gamma\, h_1\, h_2 - 7050\, d\gamma^2\, h_1\, h_2 - 1470\, d\gamma^3\, h_1\, h_2 - 150\, d\gamma^4\, h_1\, h_2 - 6\, d\gamma^5\, h_1\, h_2 -$

$12\,600\, \mathbb{i}\, h_1^2\, h_2 - 9570\, \mathbb{i}\, d\gamma\, h_1^2\, h_2 - 2685\, \mathbb{i}\, d\gamma^2\, h_1^2\, h_2 - 330\, \mathbb{i}\, d\gamma^3\, h_1^2\, h_2 - 15\, \mathbb{i}\, d\gamma^4\, h_1^2\, h_2 - 5040\, h_1^3\, h_2 -$

$2568\, d\gamma\, h_1^3\, h_2 - 432\, d\gamma^2\, h_1^3\, h_2 - 24\, d\gamma^3\, h_1^3\, h_2 - 840\, \mathbb{i}\, h_1^4\, h_2 - 260\, \mathbb{i}\, d\gamma\, h_1^4\, h_2 - 20\, \mathbb{i}\, d\gamma^2\, h_1^4\, h_2 + 7560\, h_2^2 +$

$8262\, d\gamma\, h_2^2 + 3525\, d\gamma^2\, h_2^2 + 735\, d\gamma^3\, h_2^2 + 75\, d\gamma^4\, h_2^2 + 3\, d\gamma^5\, h_2^2 + 2520\, \mathbb{i}\, h_1\, h_2^2 + 1914\, \mathbb{i}\, d\gamma\, h_1\, h_2^2 +$

$537\, \mathbb{i}\, d\gamma^2\, h_1\, h_2^2 + 66\, \mathbb{i}\, d\gamma^3\, h_1\, h_2^2 + 3\, \mathbb{i}\, d\gamma^4\, h_1\, h_2^2 + 7560\, h_1^2\, h_2^2 + 3852\, d\gamma\, h_1^2\, h_2^2 + 648\, d\gamma^2\, h_1^2\, h_2^2 +$

$36\, d\gamma^3\, h_1^2\, h_2^2 + 84\, \mathbb{i}\, h_1^3\, h_2^2 + 26\, \mathbb{i}\, d\gamma\, h_1^3\, h_2^2 + 2\, \mathbb{i}\, d\gamma^2\, h_1^3\, h_2^2 + 840\, \mathbb{i}\, h_2^3 + 638\, \mathbb{i}\, d\gamma\, h_2^3 + 179\, \mathbb{i}\, d\gamma^2\, h_2^3 +$

$22\, \mathbb{i}\, d\gamma^3\, h_2^3 + \mathbb{i}\, d\gamma^4\, h_2^3 - 3780\, h_1\, h_2^3 - 1926\, d\gamma\, h_1\, h_2^3 - 324\, d\gamma^2\, h_1\, h_2^3 - 18\, d\gamma^3\, h_1\, h_2^3 + 714\, \mathbb{i}\, h_1^2\, h_2^3 +$

$221\, \mathbb{i}\, d\gamma\, h_1^2\, h_2^3 + 17\, \mathbb{i}\, d\gamma^2\, h_1^2\, h_2^3 + 630\, h_2^4 + 321\, d\gamma\, h_2^4 + 54\, d\gamma^2\, h_2^4 + 3\, d\gamma^3\, h_2^4 - 462\, \mathbb{i}\, h_1\, h_2^4 -$

$143\, \mathbb{i}\, d\gamma\, h_1\, h_2^4 - 11\, \mathbb{i}\, d\gamma^2\, h_1\, h_2^4 + 84\, \mathbb{i}\, h_2^5 + 26\, \mathbb{i}\, d\gamma\, h_2^5 + 2\, \mathbb{i}\, d\gamma^2\, h_2^5 + 8400\, \mathbb{i}\, h_1\, x_1^2 + 6380\, \mathbb{i}\, d\gamma\, h_1\, x_1^2 +$

$1790\, \mathbb{i}\, d\gamma^2\, h_1\, x_1^2 + 220\, \mathbb{i}\, d\gamma^3\, h_1\, x_1^2 + 10\, \mathbb{i}\, d\gamma^4\, h_1\, x_1^2 + 672\, \mathbb{i}\, h_1^3\, x_1^2 + 208\, \mathbb{i}\, d\gamma\, h_1^3\, x_1^2 + 16\, \mathbb{i}\, d\gamma^2\, h_1^3\, x_1^2 -$

$4200\, \mathbb{i}\, h_2\, x_1^2 - 3190\, \mathbb{i}\, d\gamma\, h_2\, x_1^2 - 895\, \mathbb{i}\, d\gamma^2\, h_2\, x_1^2 - 110\, \mathbb{i}\, d\gamma^3\, h_2\, x_1^2 - 5\, \mathbb{i}\, d\gamma^4\, h_2\, x_1^2 - 5040\, h_1\, h_2\, x_1^2 -$

$2568\, d\gamma\, h_1\, h_2\, x_1^2 - 432\, d\gamma^2\, h_1\, h_2\, x_1^2 - 24\, d\gamma^3\, h_1\, h_2\, x_1^2 - 1008\, \mathbb{i}\, h_1^2\, h_2\, x_1^2 - 312\, \mathbb{i}\, d\gamma\, h_1^2\, h_2\, x_1^2 -$

$24\, \mathbb{i}\, d\gamma^2\, h_1^2\, h_2\, x_1^2 + 2520\, h_2^2\, x_1^2 + 1284\, d\gamma\, h_2^2\, x_1^2 + 216\, d\gamma^2\, h_2^2\, x_1^2 + 12\, d\gamma^3\, h_2^2\, x_1^2 - 252\, \mathbb{i}\, h_1\, h_2^2\, x_1^2 -$

$78\, \mathbb{i}\, d\gamma\, h_1\, h_2^2\, x_1^2 - 6\, \mathbb{i}\, d\gamma^2\, h_1\, h_2^2\, x_1^2 + 294\, \mathbb{i}\, h_2^3\, x_1^2 + 91\, \mathbb{i}\, d\gamma\, h_2^3\, x_1^2 + 7\, \mathbb{i}\, d\gamma^2\, h_2^3\, x_1^2 + 336\, \mathbb{i}\, h_1\, x_1^4 +$

$104\, \mathbb{i}\, d\gamma\, h_1\, x_1^4 + 8\, \mathbb{i}\, d\gamma^2\, h_1\, x_1^4 - 168\, \mathbb{i}\, h_2\, x_1^4 - 52\, \mathbb{i}\, d\gamma\, h_2\, x_1^4 - 4\, \mathbb{i}\, d\gamma^2\, h_2\, x_1^4 + 2520\, x_2^2 + 2754\, d\gamma\, x_2^2 +$

$1175\, d\gamma^2\, x_2^2 + 245\, d\gamma^3\, x_2^2 + 25\, d\gamma^4\, x_2^2 + d\gamma^5\, x_2^2 + 3360\, \mathbb{i}\, h_1\, x_2^2 + 2552\, \mathbb{i}\, d\gamma\, h_1\, x_2^2 + 716\, \mathbb{i}\, d\gamma^2\, h_1\, x_2^2 +$

$88\, \mathbb{i}\, d\gamma^3\, h_1\, x_2^2 + 4\, \mathbb{i}\, d\gamma^4\, h_1\, x_2^2 + 2310\, h_1^2\, x_2^2 + 1177\, d\gamma\, h_1^2\, x_2^2 + 198\, d\gamma^2\, h_1^2\, x_2^2 + 11\, d\gamma^3\, h_1^2\, x_2^2 + 420\, \mathbb{i}\, h_1^3\, x_2^2 +$

$130\, \mathbb{i}\, d\gamma\, h_1^3\, x_2^2 + 10\, \mathbb{i}\, d\gamma^2\, h_1^3\, x_2^2 - 56\, h_1^4\, x_2^2 - 8\, d\gamma\, h_1^4\, x_2^2 + 840\, \mathbb{i}\, h_2\, x_2^2 + 638\, \mathbb{i}\, d\gamma\, h_2\, x_2^2 + 179\, \mathbb{i}\, d\gamma^2\, h_2\, x_2^2 +$

$22\, \mathbb{i}\, d\gamma^3\, h_2\, x_2^2 + \mathbb{i}\, d\gamma^4\, h_2\, x_2^2 - 2940\, h_1\, h_2\, x_2^2 - 1498\, d\gamma\, h_1\, h_2\, x_2^2 - 252\, d\gamma^2\, h_1\, h_2\, x_2^2 - 14\, d\gamma^3\, h_1\, h_2\, x_2^2 +$

$630\, \mathbb{i}\, h_1^2\, h_2\, x_2^2 + 195\, \mathbb{i}\, d\gamma\, h_1^2\, h_2\, x_2^2 + 15\, \mathbb{i}\, d\gamma^2\, h_1^2\, h_2\, x_2^2 - 56\, h_1^3\, h_2\, x_2^2 - 8\, d\gamma\, h_1^3\, h_2\, x_2^2 + 420\, h_2^2\, x_2^2 +$

$214\, d\gamma\, h_2^2\, x_2^2 + 36\, d\gamma^2\, h_2^2\, x_2^2 + 2\, d\gamma^3\, h_2^2\, x_2^2 - 756\, \mathbb{i}\, h_1\, h_2^2\, x_2^2 - 234\, \mathbb{i}\, d\gamma\, h_1\, h_2^2\, x_2^2 - 18\, \mathbb{i}\, d\gamma^2\, h_1\, h_2^2\, x_2^2 +$

$42\, h_1^2\, h_2^2\, x_2^2 + 6\, d\gamma\, h_1^2\, h_2^2\, x_2^2 + 168\, \mathbb{i}\, h_2^3\, x_2^2 + 52\, \mathbb{i}\, d\gamma\, h_2^3\, x_2^2 + 4\, \mathbb{i}\, d\gamma^2\, h_2^3\, x_2^2 + 28\, h_1\, h_2^3\, x_2^2 + 4\, d\gamma\, h_1\, h_2^3\, x_2^2 -$

$14\, h_2^4\, x_2^2 - 2\, d\gamma\, h_2^4\, x_2^2 + 1050\, x_1^2\, x_2^2 + 535\, d\gamma\, x_1^2\, x_2^2 + 90\, d\gamma^2\, x_1^2\, x_2^2 + 5\, d\gamma^3\, x_1^2\, x_2^2 + 420\, \mathbb{i}\, h_1\, x_1^2\, x_2^2 +$

$130\, \mathbb{i}\, d\gamma\, h_1\, x_1^2\, x_2^2 + 10\, \mathbb{i}\, d\gamma^2\, h_1\, x_1^2\, x_2^2 - 28\, h_1^2\, x_1^2\, x_2^2 - 4\, d\gamma\, h_1^2\, x_1^2\, x_2^2 + 294\, \mathbb{i}\, h_2\, x_1^2\, x_2^2 + 91\, \mathbb{i}\, d\gamma\, h_2\, x_1^2\, x_2^2 +$

$7\, \mathbb{i}\, d\gamma^2\, h_2\, x_1^2\, x_2^2 - 140\, h_1\, h_2\, x_1^2\, x_2^2 - 20\, d\gamma\, h_1\, h_2\, x_1^2\, x_2^2 + 14\, h_2^2\, x_1^2\, x_2^2 + 2\, d\gamma\, h_2^2\, x_1^2\, x_2^2 + 28\, x_1^4\, x_2^2 +$

$4\, d\gamma\, x_1^4\, x_2^2 - 210\, x_2^4 - 107\, d\gamma\, x_2^4 - 18\, d\gamma^2\, x_2^4 - d\gamma^3\, x_2^4 - 294\, \mathbb{i}\, h_1\, x_2^4 - 91\, \mathbb{i}\, d\gamma\, h_1\, x_2^4 - 7\, \mathbb{i}\, d\gamma^2\, h_1\, x_2^4 +$

$$56\,h_1^2\,x_2^4 + 8\,d\gamma\,h_1^2\,x_2^4 + 84\,i\,h_2\,x_2^4 + 26\,i\,d\gamma\,h_2\,x_2^4 + 2\,i\,d\gamma^2\,h_2\,x_2^4 + 28\,h_1\,h_2\,x_2^4 + 4\,d\gamma\,h_1\,h_2\,x_2^4 -$$
$$28\,h_2^2\,x_2^4 - 4\,d\gamma\,h_2^2\,x_2^4 + 14\,x_1^2\,x_2^4 + 2\,d\gamma\,x_1^2\,x_2^4 - 14\,x_2^6 - 2\,d\gamma\,x_2^6 - 2520\,x_3^2 - 2754\,d\gamma\,x_3^2 - 1175\,d\gamma^2\,x_3^2 -$$
$$245\,d\gamma^3\,x_3^2 - 25\,d\gamma^4\,x_3^2 - d\gamma^5\,x_3^2 + 3360\,i\,h_1\,x_3^2 + 2552\,i\,d\gamma\,h_1\,x_3^2 + 716\,i\,d\gamma^2\,h_1\,x_3^2 + 88\,i\,d\gamma^3\,h_1\,x_3^2 +$$
$$4\,i\,d\gamma^4\,h_1\,x_3^2 - 2310\,h_1^2\,x_3^2 - 1177\,d\gamma\,h_1^2\,x_3^2 - 198\,d\gamma^2\,h_1^2\,x_3^2 - 11\,d\gamma^3\,h_1^2\,x_3^2 + 420\,i\,h_1^3\,x_3^2 + 130\,i\,d\gamma\,h_1^3\,x_3^2 +$$
$$10\,i\,d\gamma^2\,h_1^3\,x_3^2 + 56\,h_1^4\,x_3^2 + 8\,d\gamma\,h_1^4\,x_3^2 - 4200\,i\,h_2\,x_3^2 - 3190\,i\,d\gamma\,h_2\,x_3^2 - 895\,i\,d\gamma^2\,h_2\,x_3^2 -$$
$$110\,i\,d\gamma^3\,h_2\,x_3^2 - 5\,i\,d\gamma^4\,h_2\,x_3^2 + 1680\,h_1\,h_2\,x_3^2 + 856\,d\gamma\,h_1\,h_2\,x_3^2 + 144\,d\gamma^2\,h_1\,h_2\,x_3^2 + 8\,d\gamma^3\,h_1\,h_2\,x_3^2 -$$
$$1890\,i\,h_1^2\,h_2\,x_3^2 - 585\,i\,d\gamma\,h_1^2\,h_2\,x_3^2 - 45\,i\,d\gamma^2\,h_1^2\,h_2\,x_3^2 - 280\,h_1^3\,h_2\,x_3^2 - 40\,d\gamma\,h_1^3\,h_2\,x_3^2 + 210\,h_2^2\,x_3^2 +$$
$$107\,d\gamma\,h_2^2\,x_3^2 + 18\,d\gamma^2\,h_2^2\,x_3^2 + d\gamma^3\,h_2^2\,x_3^2 + 1764\,i\,h_1\,h_2^2\,x_3^2 + 546\,i\,d\gamma\,h_1\,h_2^2\,x_3^2 + 42\,i\,d\gamma^2\,h_1\,h_2^2\,x_3^2 +$$
$$462\,h_1^2\,h_2^2\,x_3^2 + 66\,d\gamma\,h_1^2\,h_2^2\,x_3^2 - 462\,i\,h_2^3\,x_3^2 - 143\,i\,d\gamma\,h_2^3\,x_3^2 - 11\,i\,d\gamma^2\,h_2^3\,x_3^2 - 280\,h_1\,h_2^3\,x_3^2 -$$
$$40\,d\gamma\,h_1\,h_2^3\,x_3^2 + 56\,h_2^4\,x_3^2 + 8\,d\gamma\,h_2^4\,x_3^2 - 1050\,x_1^2\,x_3^2 - 535\,d\gamma\,x_1^2\,x_3^2 - 90\,d\gamma^2\,x_1^2\,x_3^2 - 5\,d\gamma^3\,x_1^2\,x_3^2 +$$
$$420\,i\,h_1\,x_1^2\,x_3^2 + 130\,i\,d\gamma\,h_1\,x_1^2\,x_3^2 + 10\,i\,d\gamma^2\,h_1\,x_1^2\,x_3^2 + 28\,h_1^2\,x_1^2\,x_3^2 + 4\,d\gamma\,h_1^2\,x_1^2\,x_3^2 - 714\,i\,h_2\,x_1^2\,x_3^2 -$$
$$221\,i\,d\gamma\,h_2\,x_1^2\,x_3^2 - 17\,i\,d\gamma^2\,h_2\,x_1^2\,x_3^2 - 196\,h_1\,h_2\,x_1^2\,x_3^2 - 28\,d\gamma\,h_1\,h_2\,x_1^2\,x_3^2 + 154\,h_2^2\,x_1^2\,x_3^2 +$$
$$22\,d\gamma\,h_2^2\,x_1^2\,x_3^2 - 28\,x_1^4\,x_3^2 - 4\,d\gamma\,x_1^4\,x_3^2 + 924\,i\,h_1\,x_2^2\,x_3^2 + 286\,i\,d\gamma\,h_1\,x_2^2\,x_3^2 + 22\,i\,d\gamma^2\,h_1\,x_2^2\,x_3^2 -$$
$$462\,i\,h_2\,x_2^2\,x_3^2 - 143\,i\,d\gamma\,h_2\,x_2^2\,x_3^2 - 11\,i\,d\gamma^2\,h_2\,x_2^2\,x_3^2 - 84\,h_1\,h_2\,x_2^2\,x_3^2 - 12\,d\gamma\,h_1\,h_2\,x_2^2\,x_3^2 + 42\,h_2^2\,x_2^2\,x_3^2 +$$
$$6\,d\gamma\,h_2^2\,x_2^2\,x_3^2 - 14\,x_1^2\,x_2^2\,x_3^2 - 2\,d\gamma\,x_1^2\,x_2^2\,x_3^2 + 210\,x_3^4 + 107\,d\gamma\,x_3^4 + 18\,d\gamma^2\,x_3^4 + d\gamma^3\,x_3^4 - 294\,i\,h_1\,x_3^4 -$$
$$91\,i\,d\gamma\,h_1\,x_3^4 - 7\,i\,d\gamma^2\,h_1\,x_3^4 - 56\,h_1^2\,x_3^4 - 8\,d\gamma\,h_1^2\,x_3^4 + 210\,i\,h_2\,x_3^4 + 65\,i\,d\gamma\,h_2\,x_3^4 + 5\,i\,d\gamma^2\,h_2\,x_3^4 +$$
$$140\,h_1\,h_2\,x_3^4 + 20\,d\gamma\,h_1\,h_2\,x_3^4 - 56\,h_2^2\,x_3^4 - 8\,d\gamma\,h_2^2\,x_3^4 - 14\,x_1^2\,x_3^4 - 2\,d\gamma\,x_1^2\,x_3^4 + 14\,x_2^2\,x_3^4 + 2\,d\gamma\,x_2^2\,x_3^4 +$$
$$14\,x_3^6 + 2\,d\gamma\,x_3^6 - 2520\,h_1\,x_2\,x_3\,y_1 - 1284\,d\gamma\,h_1\,x_2\,x_3\,y_1 - 216\,d\gamma^2\,h_1\,x_2\,x_3\,y_1 - 12\,d\gamma^3\,h_1\,x_2\,x_3\,y_1 +$$
$$168\,h_1^3\,x_2\,x_3\,y_1 + 24\,d\gamma\,h_1^3\,x_2\,x_3\,y_1 + 1260\,h_2\,x_2\,x_3\,y_1 + 642\,d\gamma\,h_2\,x_2\,x_3\,y_1 + 108\,d\gamma^2\,h_2\,x_2\,x_3\,y_1 +$$
$$6\,d\gamma^3\,h_2\,x_2\,x_3\,y_1 - 1512\,i\,h_1\,h_2\,x_2\,x_3\,y_1 - 468\,i\,d\gamma\,h_1\,h_2\,x_2\,x_3\,y_1 - 36\,i\,d\gamma^2\,h_1\,h_2\,x_2\,x_3\,y_1 -$$
$$252\,h_1^2\,h_2\,x_2\,x_3\,y_1 - 36\,d\gamma\,h_1^2\,h_2\,x_2\,x_3\,y_1 + 756\,i\,h_2^2\,x_2\,x_3\,y_1 + 234\,i\,d\gamma\,h_2^2\,x_2\,x_3\,y_1 + 18\,i\,d\gamma^2\,h_2^2\,x_2\,x_3\,y_1 +$$
$$252\,h_1\,h_2^2\,x_2\,x_3\,y_1 + 36\,d\gamma\,h_1\,h_2^2\,x_2\,x_3\,y_1 - 84\,h_2^3\,x_2\,x_3\,y_1 - 12\,d\gamma\,h_2^3\,x_2\,x_3\,y_1 + 168\,h_1\,x_1^2\,x_2\,x_3\,y_1 +$$
$$24\,d\gamma\,h_1\,x_1^2\,x_2\,x_3\,y_1 - 84\,h_2\,x_1^2\,x_2\,x_3\,y_1 - 12\,d\gamma\,h_2\,x_1^2\,x_2\,x_3\,y_1 + 756\,i\,x_2^3\,x_3\,y_1 + 234\,i\,d\gamma\,x_2^3\,x_3\,y_1 +$$
$$18\,i\,d\gamma^2\,x_2^3\,x_3\,y_1 - 84\,h_1\,x_2^3\,x_3\,y_1 - 12\,d\gamma\,h_1\,x_2^3\,x_3\,y_1 - 84\,h_2\,x_2^3\,x_3\,y_1 - 12\,d\gamma\,h_2\,x_2^3\,x_3\,y_1 -$$
$$756\,i\,x_2\,x_3^3\,y_1 - 234\,i\,d\gamma\,x_2\,x_3^3\,y_1 - 18\,i\,d\gamma^2\,x_2\,x_3^3\,y_1 - 84\,h_1\,x_2\,x_3^3\,y_1 - 12\,d\gamma\,h_1\,x_2\,x_3^3\,y_1 +$$
$$168\,h_2\,x_2\,x_3^3\,y_1 + 24\,d\gamma\,h_2\,x_2\,x_3^3\,y_1 + 8400\,i\,h_1\,y_1^2 + 6380\,i\,d\gamma\,h_1\,y_1^2 + 1790\,i\,d\gamma^2\,h_1\,y_1^2 +$$
$$220\,i\,d\gamma^3\,h_1\,y_1^2 + 10\,i\,d\gamma^4\,h_1\,y_1^2 + 672\,i\,h_1^3\,y_1^2 + 208\,i\,d\gamma\,h_1^3\,y_1^2 + 16\,i\,d\gamma^2\,h_1^3\,y_1^2 - 4200\,i\,h_2\,y_1^2 -$$
$$3190\,i\,d\gamma\,h_2\,y_1^2 - 895\,i\,d\gamma^2\,h_2\,y_1^2 - 110\,i\,d\gamma^3\,h_2\,y_1^2 - 5\,i\,d\gamma^4\,h_2\,y_1^2 - 5040\,h_1\,h_2\,y_1^2 - 2568\,d\gamma\,h_1\,h_2\,y_1^2 -$$
$$432\,d\gamma^2\,h_1\,h_2\,y_1^2 - 24\,d\gamma^3\,h_1\,h_2\,y_1^2 - 1008\,i\,h_1^2\,h_2\,y_1^2 - 312\,i\,d\gamma\,h_1^2\,h_2\,y_1^2 - 24\,i\,d\gamma^2\,h_1^2\,h_2\,y_1^2 +$$
$$2520\,h_2^2\,y_1^2 + 1284\,d\gamma\,h_2^2\,y_1^2 + 216\,d\gamma^2\,h_2^2\,y_1^2 + 12\,d\gamma^3\,h_2^2\,y_1^2 - 252\,i\,h_1\,h_2^2\,y_1^2 - 78\,i\,d\gamma\,h_1\,h_2^2\,y_1^2 -$$
$$6\,i\,d\gamma^2\,h_1\,h_2^2\,y_1^2 + 294\,i\,h_2^3\,y_1^2 + 91\,i\,d\gamma\,h_2^3\,y_1^2 + 7\,i\,d\gamma^2\,h_2^3\,y_1^2 + 672\,i\,h_1\,x_1^2\,y_1^2 + 208\,i\,d\gamma\,h_1\,x_1^2\,y_1^2 +$$
$$16\,i\,d\gamma^2\,h_1\,x_1^2\,y_1^2 - 336\,i\,h_2\,x_1^2\,y_1^2 - 104\,i\,d\gamma\,h_2\,x_1^2\,y_1^2 - 8\,i\,d\gamma^2\,h_2\,x_1^2\,y_1^2 + 1050\,x_2^2\,y_1^2 + 535\,d\gamma\,x_2^2\,y_1^2 +$$
$$90\,d\gamma^2\,x_2^2\,y_1^2 + 5\,d\gamma^3\,x_2^2\,y_1^2 + 420\,i\,h_1\,x_2^2\,y_1^2 + 130\,i\,d\gamma\,h_1\,x_2^2\,y_1^2 + 10\,i\,d\gamma^2\,h_1\,x_2^2\,y_1^2 - 28\,h_1^2\,x_2^2\,y_1^2 -$$
$$4\,d\gamma\,h_1^2\,x_2^2\,y_1^2 + 294\,i\,h_2\,x_2^2\,y_1^2 + 91\,i\,d\gamma\,h_2\,x_2^2\,y_1^2 + 7\,i\,d\gamma^2\,h_2\,x_2^2\,y_1^2 - 140\,h_1\,h_2\,x_2^2\,y_1^2 - 20\,d\gamma\,h_1\,h_2\,x_2^2\,y_1^2 +$$
$$14\,h_2^2\,x_2^2\,y_1^2 + 2\,d\gamma\,h_2^2\,x_2^2\,y_1^2 + 56\,x_1^2\,x_2^2\,y_1^2 + 8\,d\gamma\,x_1^2\,x_2^2\,y_1^2 + 14\,x_2^4\,y_1^2 + 2\,d\gamma\,x_2^4\,y_1^2 - 1050\,x_3^2\,y_1^2 -$$
$$535\,d\gamma\,x_3^2\,y_1^2 - 90\,d\gamma^2\,x_3^2\,y_1^2 - 5\,d\gamma^3\,x_3^2\,y_1^2 + 420\,i\,h_1\,x_3^2\,y_1^2 + 130\,i\,d\gamma\,h_1\,x_3^2\,y_1^2 + 10\,i\,d\gamma^2\,h_1\,x_3^2\,y_1^2 +$$
$$28\,h_1^2\,x_3^2\,y_1^2 + 4\,d\gamma\,h_1^2\,x_3^2\,y_1^2 - 714\,i\,h_2\,x_3^2\,y_1^2 - 221\,i\,d\gamma\,h_2\,x_3^2\,y_1^2 - 17\,i\,d\gamma^2\,h_2\,x_3^2\,y_1^2 - 196\,h_1\,h_2\,x_3^2\,y_1^2 -$$
$$28\,d\gamma\,h_1\,h_2\,x_3^2\,y_1^2 + 154\,h_2^2\,x_3^2\,y_1^2 + 22\,d\gamma\,h_2^2\,x_3^2\,y_1^2 - 56\,x_1^2\,x_3^2\,y_1^2 - 8\,d\gamma\,x_1^2\,x_3^2\,y_1^2 - 14\,x_2^2\,x_3^2\,y_1^2 - 2\,d\gamma\,x_2^2\,x_3^2\,y_1^2 +$$
$$168\,h_1\,x_2\,x_3\,y_1^3 + 24\,d\gamma\,h_1\,x_2\,x_3\,y_1^3 - 84\,h_2\,x_2\,x_3\,y_1^3 - 12\,d\gamma\,h_2\,x_2\,x_3\,y_1^3 + 336\,i\,h_1\,y_1^4 + 104\,i\,d\gamma\,h_1\,y_1^4 +$$
$$8\,i\,d\gamma^2\,h_1\,y_1^4 - 168\,i\,h_2\,y_1^4 - 52\,i\,d\gamma\,h_2\,y_1^4 - 4\,i\,d\gamma^2\,h_2\,y_1^4 + 28\,x_2^2\,y_1^4 + 4\,d\gamma\,x_2^2\,y_1^4 - 28\,x_3^2\,y_1^4 -$$
$$4\,d\gamma\,x_3^2\,y_1^4 - 2520\,h_1\,x_1\,x_3\,y_2 - 1284\,d\gamma\,h_1\,x_1\,x_3\,y_2 - 216\,d\gamma^2\,h_1\,x_1\,x_3\,y_2 - 12\,d\gamma^3\,h_1\,x_1\,x_3\,y_2 +$$
$$168\,h_1^3\,x_1\,x_3\,y_2 + 24\,d\gamma\,h_1^3\,x_1\,x_3\,y_2 + 1260\,h_2\,x_1\,x_3\,y_2 + 642\,d\gamma\,h_2\,x_1\,x_3\,y_2 + 108\,d\gamma^2\,h_2\,x_1\,x_3\,y_2 +$$
$$6\,d\gamma^3\,h_2\,x_1\,x_3\,y_2 - 1512\,i\,h_1\,h_2\,x_1\,x_3\,y_2 - 468\,i\,d\gamma\,h_1\,h_2\,x_1\,x_3\,y_2 - 36\,i\,d\gamma^2\,h_1\,h_2\,x_1\,x_3\,y_2 -$$
$$252\,h_1^2\,h_2\,x_1\,x_3\,y_2 - 36\,d\gamma\,h_1^2\,h_2\,x_1\,x_3\,y_2 + 756\,i\,h_2^2\,x_1\,x_3\,y_2 + 234\,i\,d\gamma\,h_2^2\,x_1\,x_3\,y_2 + 18\,i\,d\gamma^2\,h_2^2\,x_1\,x_3\,y_2 +$$
$$252\,h_1\,h_2^2\,x_1\,x_3\,y_2 + 36\,d\gamma\,h_1\,h_2^2\,x_1\,x_3\,y_2 - 84\,h_2^3\,x_1\,x_3\,y_2 - 12\,d\gamma\,h_2^3\,x_1\,x_3\,y_2 + 168\,h_1\,x_1^3\,x_3\,y_2 +$$
$$24\,d\gamma\,h_1\,x_1^3\,x_3\,y_2 - 84\,h_2\,x_1^3\,x_3\,y_2 - 12\,d\gamma\,h_2\,x_1^3\,x_3\,y_2 + 756\,i\,x_1\,x_2^2\,x_3\,y_2 + 234\,i\,d\gamma\,x_1\,x_2^2\,x_3\,y_2 +$$
$$18\,i\,d\gamma^2\,x_1\,x_2^2\,x_3\,y_2 - 84\,h_1\,x_1\,x_2^2\,x_3\,y_2 - 12\,d\gamma\,h_1\,x_1\,x_2^2\,x_3\,y_2 - 84\,h_2\,x_1\,x_2^2\,x_3\,y_2 - 12\,d\gamma\,h_2\,x_1\,x_2^2\,x_3\,y_2 -$$
$$756\,i\,x_1\,x_3^3\,y_2 - 234\,i\,d\gamma\,x_1\,x_3^3\,y_2 - 18\,i\,d\gamma^2\,x_1\,x_3^3\,y_2 - 84\,h_1\,x_1\,x_3^3\,y_2 - 12\,d\gamma\,h_1\,x_1\,x_3^3\,y_2 +$$

$$168 h_2 x_1 x_3^3 y_2 + 24 d\gamma\, h_2 x_1 x_3^3 y_2 + 168 h_1 x_1 x_3 y_1^2 y_2 + 24 d\gamma\, h_1 x_1 x_3 y_1^2 y_2 - 84 h_2 x_1 x_3 y_1^2 y_2 -$$
$$12 d\gamma\, h_2 x_1 x_3 y_1^2 y_2 + 2520 y_2^2 + 2754 d\gamma\, y_2^2 + 1175 d\gamma^2 y_2^2 + 245 d\gamma^3 y_2^2 + 25 d\gamma^4 y_2^2 + d\gamma^5 y_2^2 +$$
$$3360 \,\mathbb{i}\, h_1 y_2^2 + 2552 \,\mathbb{i}\, d\gamma\, h_1 y_2^2 + 716 \,\mathbb{i}\, d\gamma^2 h_1 y_2^2 + 88 \,\mathbb{i}\, d\gamma^3 h_1 y_2^2 + 4 \,\mathbb{i}\, d\gamma^4 h_1 y_2^2 + 2310 h_1^2 y_2^2 +$$
$$1177 d\gamma\, h_1^2 y_2^2 + 198 d\gamma^2 h_1^2 y_2^2 + 11 d\gamma^3 h_1^2 y_2^2 + 420 \,\mathbb{i}\, h_1^3 y_2^2 + 130 \,\mathbb{i}\, d\gamma\, h_1^3 y_2^2 + 10 \,\mathbb{i}\, d\gamma^2 h_1^3 y_2^2 -$$
$$56 h_1^4 y_2^2 - 8 d\gamma\, h_1^4 y_2^2 + 840 \,\mathbb{i}\, h_2 y_2^2 + 638 \,\mathbb{i}\, d\gamma\, h_2 y_2^2 + 179 \,\mathbb{i}\, d\gamma^2 h_2 y_2^2 + 22 \,\mathbb{i}\, d\gamma^3 h_2 y_2^2 +$$
$$\mathbb{i}\, d\gamma^4 h_2 y_2^2 - 2940 h_1 h_2 y_2^2 - 1498 d\gamma\, h_1 h_2 y_2^2 - 252 d\gamma^2 h_1 h_2 y_2^2 - 14 d\gamma^3 h_1 h_2 y_2^2 + 630 \,\mathbb{i}\, h_1^2 h_2 y_2^2 +$$
$$195 \,\mathbb{i}\, d\gamma\, h_1^2 h_2 y_2^2 + 15 \,\mathbb{i}\, d\gamma^2 h_1^2 h_2 y_2^2 - 56 h_1^3 h_2 y_2^2 - 8 d\gamma\, h_1^3 h_2 y_2^2 + 420 h_2^2 y_2^2 + 214 d\gamma\, h_2^2 y_2^2 +$$
$$36 d\gamma^2 h_2^2 y_2^2 + 2 d\gamma^3 h_2^2 y_2^2 - 756 \,\mathbb{i}\, h_1 h_2^2 y_2^2 - 234 \,\mathbb{i}\, d\gamma\, h_1 h_2^2 y_2^2 - 18 \,\mathbb{i}\, d\gamma^2 h_1 h_2^2 y_2^2 + 42 h_1^2 h_2^2 y_2^2 +$$
$$6 d\gamma\, h_1^2 h_2^2 y_2^2 + 168 \,\mathbb{i}\, h_2^3 y_2^2 + 52 \,\mathbb{i}\, d\gamma\, h_2^3 y_2^2 + 4 \,\mathbb{i}\, d\gamma^2 h_2^3 y_2^2 + 28 h_1 h_2^3 y_2^2 + 4 d\gamma\, h_1 h_2^3 y_2^2 - 14 h_2^4 y_2^2 -$$
$$2 d\gamma\, h_2^4 y_2^2 + 1050 x_1^2 y_2^2 + 535 d\gamma\, x_1^2 y_2^2 + 90 d\gamma^2 x_1^2 y_2^2 + 5 d\gamma^3 x_1^2 y_2^2 + 420 \,\mathbb{i}\, h_1 x_1^2 y_2^2 + 130 \,\mathbb{i}\, d\gamma\, h_1 x_1^2 y_2^2 +$$
$$10 \,\mathbb{i}\, d\gamma^2 h_1 x_1^2 y_2^2 - 28 h_1^2 x_1^2 y_2^2 - 4 d\gamma\, h_1^2 x_1^2 y_2^2 + 294 \,\mathbb{i}\, h_2 x_1^2 y_2^2 + 91 \,\mathbb{i}\, d\gamma\, h_2 x_1^2 y_2^2 + 7 \,\mathbb{i}\, d\gamma^2 h_2 x_1^2 y_2^2 -$$
$$140 h_1 h_2 x_1^2 y_2^2 - 20 d\gamma\, h_1 h_2 x_1^2 y_2^2 + 14 h_2^2 x_1^2 y_2^2 + 2 d\gamma\, h_2^2 x_1^2 y_2^2 + 28 x_1^4 y_2^2 + 4 d\gamma\, x_1^4 y_2^2 - 420 x_2^2 y_2^2 -$$
$$214 d\gamma\, x_2^2 y_2^2 - 36 d\gamma^2 x_2^2 y_2^2 - 2 d\gamma^3 x_2^2 y_2^2 - 588 \,\mathbb{i}\, h_1 x_2^2 y_2^2 - 182 \,\mathbb{i}\, d\gamma\, h_1 x_2^2 y_2^2 - 14 \,\mathbb{i}\, d\gamma^2 h_1 x_2^2 y_2^2 +$$
$$112 h_1^2 x_2^2 y_2^2 + 16 d\gamma\, h_1^2 x_2^2 y_2^2 + 168 \,\mathbb{i}\, h_2 x_2^2 y_2^2 + 52 \,\mathbb{i}\, d\gamma\, h_2 x_2^2 y_2^2 + 4 \,\mathbb{i}\, d\gamma^2 h_2 x_2^2 y_2^2 + 56 h_1 h_2 x_2^2 y_2^2 +$$
$$8 d\gamma\, h_1 h_2 x_2^2 y_2^2 - 56 h_2^2 x_2^2 y_2^2 - 8 d\gamma\, h_2^2 x_2^2 y_2^2 + 28 x_1^2 x_2^2 y_2^2 + 4 d\gamma\, x_1^2 x_2^2 y_2^2 - 42 x_2^4 y_2^2 - 6 d\gamma\, x_2^4 y_2^2 +$$
$$924 \,\mathbb{i}\, h_1 x_3^2 y_2^2 + 286 \,\mathbb{i}\, d\gamma\, h_1 x_3^2 y_2^2 + 22 \,\mathbb{i}\, d\gamma^2 h_1 x_3^2 y_2^2 - 462 \,\mathbb{i}\, h_2 x_3^2 y_2^2 - 143 \,\mathbb{i}\, d\gamma\, h_2 x_3^2 y_2^2 -$$
$$11 \,\mathbb{i}\, d\gamma^2 h_2 x_3^2 y_2^2 - 84 h_1 h_2 x_3^2 y_2^2 - 12 d\gamma\, h_1 h_2 x_3^2 y_2^2 + 42 h_2^2 x_3^2 y_2^2 + 6 d\gamma\, h_2^2 x_3^2 y_2^2 - 28 x_2^2 x_3^2 y_2^2 -$$
$$4 d\gamma\, x_2^2 x_3^2 y_2^2 + 14 x_3^4 y_2^2 + 2 d\gamma\, x_3^4 y_2^2 + 756 \,\mathbb{i}\, x_2 x_3 y_1 y_2^2 + 234 \,\mathbb{i}\, d\gamma\, x_2 x_3 y_1 y_2^2 + 18 \,\mathbb{i}\, d\gamma^2 x_2 x_3 y_1 y_2^2 -$$
$$84 h_1 x_2 x_3 y_1 y_2^2 - 12 d\gamma\, h_1 x_2 x_3 y_1 y_2^2 - 84 h_2 x_2 x_3 y_1 y_2^2 - 12 d\gamma\, h_2 x_2 x_3 y_1 y_2^2 + 1050 y_1^2 y_2^2 +$$
$$535 d\gamma\, y_1^2 y_2^2 + 90 d\gamma^2 y_1^2 y_2^2 + 5 d\gamma^3 y_1^2 y_2^2 + 420 \,\mathbb{i}\, h_1 y_1^2 y_2^2 + 130 \,\mathbb{i}\, d\gamma\, h_1 y_1^2 y_2^2 + 10 \,\mathbb{i}\, d\gamma^2 h_1 y_1^2 y_2^2 -$$
$$28 h_1^2 y_1^2 y_2^2 - 4 d\gamma\, h_1^2 y_1^2 y_2^2 + 294 \,\mathbb{i}\, h_2 y_1^2 y_2^2 + 91 \,\mathbb{i}\, d\gamma\, h_2 y_1^2 y_2^2 + 7 \,\mathbb{i}\, d\gamma^2 h_2 y_1^2 y_2^2 - 140 h_1 h_2 y_1^2 y_2^2 -$$
$$20 d\gamma\, h_1 h_2 y_1^2 y_2^2 + 14 h_2^2 y_1^2 y_2^2 + 2 d\gamma\, h_2^2 y_1^2 y_2^2 + 56 x_1^2 y_1^2 y_2^2 + 8 d\gamma\, x_1^2 y_1^2 y_2^2 + 28 x_2^2 y_1^2 y_2^2 +$$
$$4 d\gamma\, x_2^2 y_1^2 y_2^2 + 28 y_1^4 y_2^2 + 4 d\gamma\, y_1^4 y_2^2 + 756 \,\mathbb{i}\, x_1 x_3 y_2^3 + 234 \,\mathbb{i}\, d\gamma\, x_1 x_3 y_2^3 + 18 \,\mathbb{i}\, d\gamma^2 x_1 x_3 y_2^3 -$$
$$84 h_1 x_1 x_3 y_2^3 - 12 d\gamma\, h_1 x_1 x_3 y_2^3 - 84 h_2 x_1 x_3 y_2^3 - 12 d\gamma\, h_2 x_1 x_3 y_2^3 - 210 y_2^4 - 107 d\gamma\, y_2^4 -$$
$$18 d\gamma^2 y_2^4 - d\gamma^3 y_2^4 - 294 \,\mathbb{i}\, h_1 y_2^4 - 91 \,\mathbb{i}\, d\gamma\, h_1 y_2^4 - 7 \,\mathbb{i}\, d\gamma^2 h_1 y_2^4 + 56 h_1^2 y_2^4 + 8 d\gamma\, h_1^2 y_2^4 + 84 \,\mathbb{i}\, h_2 y_2^4 +$$
$$26 \,\mathbb{i}\, d\gamma\, h_2 y_2^4 + 2 \,\mathbb{i}\, d\gamma^2 h_2 y_2^4 + 28 h_1 h_2 y_2^4 + 4 d\gamma\, h_1 h_2 y_2^4 - 28 h_2^2 y_2^4 - 4 d\gamma\, h_2^2 y_2^4 + 14 x_1^2 y_2^4 +$$
$$2 d\gamma\, x_1^2 y_2^4 - 42 x_2^2 y_2^4 - 6 d\gamma\, x_2^2 y_2^4 - 14 x_3^2 y_2^4 - 2 d\gamma\, x_3^2 y_2^4 + 14 y_1^2 y_2^4 + 2 d\gamma\, y_1^2 y_2^4 - 14 y_2^6 - 2 d\gamma\, y_2^6 +$$
$$2520 h_1 x_1 x_2 y_3 + 1284 d\gamma\, h_1 x_1 x_2 y_3 + 216 d\gamma^2 h_1 x_1 x_2 y_3 + 12 d\gamma^3 h_1 x_1 x_2 y_3 - 168 h_1^3 x_1 x_2 y_3 -$$
$$24 d\gamma\, h_1^3 x_1 x_2 y_3 - 1260 h_2 x_1 x_2 y_3 - 642 d\gamma\, h_2 x_1 x_2 y_3 - 108 d\gamma^2 h_2 x_1 x_2 y_3 - 6 d\gamma^3 h_2 x_1 x_2 y_3 +$$
$$1512 \,\mathbb{i}\, h_1 h_2 x_1 x_2 y_3 + 468 \,\mathbb{i}\, d\gamma\, h_1 h_2 x_1 x_2 y_3 + 36 \,\mathbb{i}\, d\gamma^2 h_1 h_2 x_1 x_2 y_3 + 252 h_1^2 h_2 x_1 x_2 y_3 +$$
$$36 d\gamma\, h_1^2 h_2 x_1 x_2 y_3 - 756 \,\mathbb{i}\, h_2^2 x_1 x_2 y_3 - 234 \,\mathbb{i}\, d\gamma\, h_2^2 x_1 x_2 y_3 - 18 \,\mathbb{i}\, d\gamma^2 h_2^2 x_1 x_2 y_3 - 252 h_1 h_2^2 x_1 x_2 y_3 -$$
$$36 d\gamma\, h_1 h_2^2 x_1 x_2 y_3 + 84 h_2^3 x_1 x_2 y_3 + 12 d\gamma\, h_2^3 x_1 x_2 y_3 - 168 h_1 x_1^3 x_2 y_3 - 24 d\gamma\, h_1 x_1^3 x_2 y_3 +$$
$$84 h_2 x_1^3 x_2 y_3 + 12 d\gamma\, h_2 x_1^3 x_2 y_3 - 756 \,\mathbb{i}\, x_1 x_2^3 y_3 - 234 \,\mathbb{i}\, d\gamma\, x_1 x_2^3 y_3 - 18 \,\mathbb{i}\, d\gamma^2 x_1 x_2^3 y_3 +$$
$$84 h_1 x_1 x_2^3 y_3 + 12 d\gamma\, h_1 x_1 x_2^3 y_3 + 84 h_2 x_1 x_2^3 y_3 + 12 d\gamma\, h_2 x_1 x_2^3 y_3 + 756 \,\mathbb{i}\, x_1 x_2 x_3^2 y_3 +$$
$$234 \,\mathbb{i}\, d\gamma\, x_1 x_2 x_3^2 y_3 + 18 \,\mathbb{i}\, d\gamma^2 x_1 x_2 x_3^2 y_3 + 84 h_1 x_1 x_2 x_3^2 y_3 + 12 d\gamma\, h_1 x_1 x_2 x_3^2 y_3 - 168 h_2 x_1 x_2 x_3^2 y_3 -$$
$$24 d\gamma\, h_2 x_1 x_2 x_3^2 y_3 - 168 h_1 x_1 x_2 y_1^2 y_3 - 24 d\gamma\, h_1 x_1 x_2 y_1^2 y_3 + 84 h_2 x_1 x_2 y_1^2 y_3 + 12 d\gamma\, h_2 x_1 x_2 y_1^2 y_3 -$$
$$2520 h_1 y_1 y_2 y_3 - 1284 d\gamma\, h_1 y_1 y_2 y_3 - 216 d\gamma^2 h_1 y_1 y_2 y_3 - 12 d\gamma^3 h_1 y_1 y_2 y_3 + 168 h_1^3 y_1 y_2 y_3 +$$
$$24 d\gamma\, h_1^3 y_1 y_2 y_3 + 1260 h_2 y_1 y_2 y_3 + 642 d\gamma\, h_2 y_1 y_2 y_3 + 108 d\gamma^2 h_2 y_1 y_2 y_3 + 6 d\gamma^3 h_2 y_1 y_2 y_3 -$$
$$1512 \,\mathbb{i}\, h_1 h_2 y_1 y_2 y_3 - 468 \,\mathbb{i}\, d\gamma\, h_1 h_2 y_1 y_2 y_3 - 36 \,\mathbb{i}\, d\gamma^2 h_1 h_2 y_1 y_2 y_3 - 252 h_1^2 h_2 y_1 y_2 y_3 -$$
$$36 d\gamma\, h_1^2 h_2 y_1 y_2 y_3 + 756 \,\mathbb{i}\, h_2^2 y_1 y_2 y_3 + 234 \,\mathbb{i}\, d\gamma\, h_2^2 y_1 y_2 y_3 + 18 \,\mathbb{i}\, d\gamma^2 h_2^2 y_1 y_2 y_3 +$$
$$252 h_1 h_2^2 y_1 y_2 y_3 + 36 d\gamma\, h_1 h_2^2 y_1 y_2 y_3 - 84 h_2^3 y_1 y_2 y_3 - 12 d\gamma\, h_2^3 y_1 y_2 y_3 + 168 h_1 x_1^2 y_1 y_2 y_3 +$$
$$24 d\gamma\, h_1 x_1^2 y_1 y_2 y_3 - 84 h_2 x_1^2 y_1 y_2 y_3 - 12 d\gamma\, h_2 x_1^2 y_1 y_2 y_3 + 756 \,\mathbb{i}\, x_2^2 y_1 y_2 y_3 + 234 \,\mathbb{i}\, d\gamma\, x_2^2 y_1 y_2 y_3 +$$
$$18 \,\mathbb{i}\, d\gamma^2 x_2^2 y_1 y_2 y_3 - 84 h_1 x_2^2 y_1 y_2 y_3 - 12 d\gamma\, h_1 x_2^2 y_1 y_2 y_3 - 84 h_2 x_2^2 y_1 y_2 y_3 - 12 d\gamma\, h_2 x_2^2 y_1 y_2 y_3 -$$
$$756 \,\mathbb{i}\, x_3^2 y_1 y_2 y_3 - 234 \,\mathbb{i}\, d\gamma\, x_3^2 y_1 y_2 y_3 - 18 \,\mathbb{i}\, d\gamma^2 x_3^2 y_1 y_2 y_3 - 84 h_1 x_3^2 y_1 y_2 y_3 - 12 d\gamma\, h_1 x_3^2 y_1 y_2 y_3 +$$
$$168 h_2 x_3^2 y_1 y_2 y_3 + 24 d\gamma\, h_2 x_3^2 y_1 y_2 y_3 + 168 h_1 y_1^3 y_2 y_3 + 24 d\gamma\, h_1 y_1^3 y_2 y_3 - 84 h_2 y_1^3 y_2 y_3 -$$
$$12 d\gamma\, h_2 y_1^3 y_2 y_3 - 756 \,\mathbb{i}\, x_1 x_2 y_2^2 y_3 - 234 \,\mathbb{i}\, d\gamma\, x_1 x_2 y_2^2 y_3 - 18 \,\mathbb{i}\, d\gamma^2 x_1 x_2 y_2^2 y_3 + 84 h_1 x_1 x_2 y_2^2 y_3 +$$
$$12 d\gamma\, h_1 x_1 x_2 y_2^2 y_3 + 84 h_2 x_1 x_2 y_2^2 y_3 + 12 d\gamma\, h_2 x_1 x_2 y_2^2 y_3 + 756 \,\mathbb{i}\, y_1 y_2^3 y_3 + 234 \,\mathbb{i}\, d\gamma\, y_1 y_2^3 y_3 +$$
$$18 \,\mathbb{i}\, d\gamma^2 y_1 y_2^3 y_3 - 84 h_1 y_1 y_2^3 y_3 - 12 d\gamma\, h_1 y_1 y_2^3 y_3 - 84 h_2 y_1 y_2^3 y_3 - 12 d\gamma\, h_2 y_1 y_2^3 y_3 - 2520 y_3^2 -$$

$2754 \, d\gamma \, y_3^2 - 1175 \, d\gamma^2 \, y_3^2 - 245 \, d\gamma^3 \, y_3^2 - 25 \, d\gamma^4 \, y_3^2 - d\gamma^5 \, y_3^2 + 3360 \, i \, h_1 \, y_3^2 + 2552 \, i \, d\gamma \, h_1 \, y_3^2 +$
$716 \, i \, d\gamma^2 \, h_1 \, y_3^2 + 88 \, i \, d\gamma^3 \, h_1 \, y_3^2 + 4 \, i \, d\gamma^4 \, h_1 \, y_3^2 - 2310 \, h_1^2 \, y_3^2 - 1177 \, d\gamma \, h_1^2 \, y_3^2 - 198 \, d\gamma^2 \, h_1^2 \, y_3^2 -$
$11 \, d\gamma^3 \, h_1^2 \, y_3^2 + 420 \, i \, h_1^3 \, y_3^2 + 130 \, i \, d\gamma \, h_1^3 \, y_3^2 + 10 \, i \, d\gamma^2 \, h_1^3 \, y_3^2 + 56 \, h_1^4 \, y_3^2 + 8 \, d\gamma \, h_1^4 \, y_3^2 - 4200 \, i \, h_2 \, y_3^2 -$
$3190 \, i \, d\gamma \, h_2 \, y_3^2 - 895 \, i \, d\gamma^2 \, h_2 \, y_3^2 - 110 \, i \, d\gamma^3 \, h_2 \, y_3^2 - 5 \, i \, d\gamma^4 \, h_2 \, y_3^2 + 1680 \, h_1 \, h_2 \, y_3^2 + 856 \, d\gamma \, h_1 \, h_2 \, y_3^2 +$
$144 \, d\gamma^2 \, h_1 \, h_2 \, y_3^2 + 8 \, d\gamma^3 \, h_1 \, h_2 \, y_3^2 - 1890 \, i \, h_1^2 \, h_2 \, y_3^2 - 585 \, i \, d\gamma \, h_1^2 \, h_2 \, y_3^2 - 45 \, i \, d\gamma^2 \, h_1^2 \, h_2 \, y_3^2 -$
$280 \, h_1^3 \, h_2 \, y_3^2 - 40 \, d\gamma \, h_1^3 \, h_2 \, y_3^2 + 210 \, h_2^2 \, y_3^2 + 107 \, d\gamma \, h_2^2 \, y_3^2 + 18 \, d\gamma^2 \, h_2^2 \, y_3^2 + d\gamma^3 \, h_2^2 \, y_3^2 + 1764 \, i \, h_1 \, h_2^2 \, y_3^2 +$
$546 \, i \, d\gamma \, h_1 \, h_2^2 \, y_3^2 + 42 \, i \, d\gamma^2 \, h_1 \, h_2^2 \, y_3^2 + 462 \, h_1^2 \, h_2^2 \, y_3^2 + 66 \, d\gamma \, h_1^2 \, h_2^2 \, y_3^2 - 462 \, i \, h_2^3 \, y_3^2 - 143 \, i \, d\gamma \, h_2^3 \, y_3^2 -$
$11 \, i \, d\gamma^2 \, h_2^3 \, y_3^2 - 280 \, h_1 \, h_2^3 \, y_3^2 - 40 \, d\gamma \, h_1 \, h_2^3 \, y_3^2 + 56 \, h_2^4 \, y_3^2 + 8 \, d\gamma \, h_2^4 \, y_3^2 - 1050 \, x_1^2 \, y_3^2 - 535 \, d\gamma \, x_1^2 \, y_3^2 -$
$90 \, d\gamma^2 \, x_1^2 \, y_3^2 - 5 \, d\gamma^3 \, x_1^2 \, y_3^2 + 420 \, i \, h_1 \, x_1^2 \, y_3^2 + 130 \, i \, d\gamma \, h_1 \, x_1^2 \, y_3^2 + 10 \, i \, d\gamma^2 \, h_1 \, x_1^2 \, y_3^2 + 28 \, h_1^2 \, x_1^2 \, y_3^2 +$
$4 \, d\gamma \, h_1^2 \, x_1^2 \, y_3^2 - 714 \, i \, h_2 \, x_1^2 \, y_3^2 - 221 \, i \, d\gamma \, h_2 \, x_1^2 \, y_3^2 - 17 \, i \, d\gamma^2 \, h_2 \, x_1^2 \, y_3^2 - 196 \, h_1 \, h_2 \, x_1^2 \, y_3^2 -$
$28 \, d\gamma \, h_1 \, h_2 \, x_1^2 \, y_3^2 + 154 \, h_2^2 \, x_1^2 \, y_3^2 + 22 \, d\gamma \, h_2^2 \, x_1^2 \, y_3^2 - 28 \, x_1^4 \, y_3^2 - 4 \, d\gamma \, x_1^4 \, y_3^2 + 924 \, i \, h_1 \, x_2^2 \, y_3^2 +$
$286 \, i \, d\gamma \, h_1 \, x_2^2 \, y_3^2 + 22 \, i \, d\gamma^2 \, h_1 \, x_2^2 \, y_3^2 - 462 \, i \, h_2 \, x_2^2 \, y_3^2 - 143 \, i \, d\gamma \, h_2 \, x_2^2 \, y_3^2 - 11 \, i \, d\gamma^2 \, h_2 \, x_2^2 \, y_3^2 -$
$84 \, h_1 \, h_2 \, x_2^2 \, y_3^2 - 12 \, d\gamma \, h_1 \, h_2 \, x_2^2 \, y_3^2 + 42 \, h_2^2 \, x_2^2 \, y_3^2 + 6 \, d\gamma \, h_2^2 \, x_2^2 \, y_3^2 - 14 \, x_2^4 \, y_3^2 - 2 \, d\gamma \, x_2^4 \, y_3^2 + 420 \, x_3^2 \, y_3^2 +$
$214 \, d\gamma \, x_3^2 \, y_3^2 + 36 \, d\gamma^2 \, x_3^2 \, y_3^2 + 2 \, d\gamma^3 \, x_3^2 \, y_3^2 - 588 \, i \, h_1 \, x_3^2 \, y_3^2 - 182 \, i \, d\gamma \, h_1 \, x_3^2 \, y_3^2 - 14 \, i \, d\gamma^2 \, h_1 \, x_3^2 \, y_3^2 -$
$112 \, h_1^2 \, x_3^2 \, y_3^2 - 16 \, d\gamma \, h_1^2 \, x_3^2 \, y_3^2 + 420 \, i \, h_2 \, x_3^2 \, y_3^2 + 130 \, i \, d\gamma \, h_2 \, x_3^2 \, y_3^2 + 10 \, i \, d\gamma^2 \, h_2 \, x_3^2 \, y_3^2 + 280 \, h_1 \, h_2 \, x_3^2 \, y_3^2 +$
$40 \, d\gamma \, h_1 \, h_2 \, x_3^2 \, y_3^2 - 112 \, h_2^2 \, x_3^2 \, y_3^2 - 16 \, d\gamma \, h_2^2 \, x_3^2 \, y_3^2 - 28 \, x_1^2 \, x_3^2 \, y_3^2 - 4 \, d\gamma \, x_1^2 \, x_3^2 \, y_3^2 + 28 \, x_2^2 \, x_3^2 \, y_3^2 +$
$4 \, d\gamma \, x_2^2 \, x_3^2 \, y_3^2 + 42 \, x_3^4 \, y_3^2 + 6 \, d\gamma \, x_3^4 \, y_3^2 - 756 \, i \, x_2 \, x_3 \, y_1 \, y_3^2 - 234 \, i \, d\gamma \, x_2 \, x_3 \, y_1 \, y_3^2 - 18 \, i \, d\gamma^2 \, x_2 \, x_3 \, y_1 \, y_3^2 -$
$84 \, h_1 \, x_2 \, x_3 \, y_1 \, y_3^2 - 12 \, d\gamma \, h_1 \, x_2 \, x_3 \, y_1 \, y_3^2 + 168 \, h_2 \, x_2 \, x_3 \, y_1 \, y_3^2 + 24 \, d\gamma \, h_2 \, x_2 \, x_3 \, y_1 \, y_3^2 - 1050 \, y_1^2 \, y_3^2 -$
$535 \, d\gamma \, y_1^2 \, y_3^2 - 90 \, d\gamma^2 \, y_1^2 \, y_3^2 - 5 \, d\gamma^3 \, y_1^2 \, y_3^2 + 420 \, i \, h_1 \, y_1^2 \, y_3^2 + 130 \, i \, d\gamma \, h_1 \, y_1^2 \, y_3^2 + 10 \, i \, d\gamma^2 \, h_1 \, y_1^2 \, y_3^2 +$
$28 \, h_1^2 \, y_1^2 \, y_3^2 + 4 \, d\gamma \, h_1^2 \, y_1^2 \, y_3^2 - 714 \, i \, h_2 \, y_1^2 \, y_3^2 - 221 \, i \, d\gamma \, h_2 \, y_1^2 \, y_3^2 - 17 \, i \, d\gamma^2 \, h_2 \, y_1^2 \, y_3^2 - 196 \, h_1 \, h_2 \, y_1^2 \, y_3^2 -$
$28 \, d\gamma \, h_1 \, h_2 \, y_1^2 \, y_3^2 + 154 \, h_2^2 \, y_1^2 \, y_3^2 + 22 \, d\gamma \, h_2^2 \, y_1^2 \, y_3^2 - 56 \, x_1^2 \, y_1^2 \, y_3^2 - 8 \, d\gamma \, x_1^2 \, y_1^2 \, y_3^2 - 28 \, x_3^2 \, y_1^2 \, y_3^2 -$
$4 \, d\gamma \, x_3^2 \, y_1^2 \, y_3^2 - 28 \, y_1^4 \, y_3^2 - 4 \, d\gamma \, y_1^4 \, y_3^2 - 756 \, i \, x_1 \, x_3 \, y_2 \, y_3^2 - 234 \, i \, d\gamma \, x_1 \, x_3 \, y_2 \, y_3^2 - 18 \, i \, d\gamma^2 \, x_1 \, x_3 \, y_2 \, y_3^2 -$
$84 \, h_1 \, x_1 \, x_3 \, y_2 \, y_3^2 - 12 \, d\gamma \, h_1 \, x_1 \, x_3 \, y_2 \, y_3^2 + 168 \, h_2 \, x_1 \, x_3 \, y_2 \, y_3^2 + 24 \, d\gamma \, h_2 \, x_1 \, x_3 \, y_2 \, y_3^2 + 924 \, i \, h_1 \, y_2^2 \, y_3^2 +$
$286 \, i \, d\gamma \, h_1 \, y_2^2 \, y_3^2 + 22 \, i \, d\gamma^2 \, h_1 \, y_2^2 \, y_3^2 - 462 \, i \, h_2 \, y_2^2 \, y_3^2 - 143 \, i \, d\gamma \, h_2 \, y_2^2 \, y_3^2 - 11 \, i \, d\gamma^2 \, h_2 \, y_2^2 \, y_3^2 -$
$84 \, h_1 \, h_2 \, y_2^2 \, y_3^2 - 12 \, d\gamma \, h_1 \, h_2 \, y_2^2 \, y_3^2 + 42 \, h_2^2 \, y_2^2 \, y_3^2 + 6 \, d\gamma \, h_2^2 \, y_2^2 \, y_3^2 - 28 \, x_2^2 \, y_2^2 \, y_3^2 - 4 \, d\gamma \, x_2^2 \, y_2^2 \, y_3^2 +$
$28 \, x_3^2 \, y_2^2 \, y_3^2 + 4 \, d\gamma \, x_3^2 \, y_2^2 \, y_3^2 - 14 \, y_2^4 \, y_3^2 - 2 \, d\gamma \, y_2^4 \, y_3^2 + 756 \, i \, x_1 \, x_2 \, y_3^3 + 234 \, i \, d\gamma \, x_1 \, x_2 \, y_3^3 +$
$18 \, i \, d\gamma^2 \, x_1 \, x_2 \, y_3^3 + 84 \, h_1 \, x_1 \, x_2 \, y_3^3 + 12 \, d\gamma \, h_1 \, x_1 \, x_2 \, y_3^3 - 168 \, h_2 \, x_1 \, x_2 \, y_3^3 - 24 \, d\gamma \, h_2 \, x_1 \, x_2 \, y_3^3 -$
$756 \, i \, y_1 \, y_2 \, y_3^3 - 234 \, i \, d\gamma \, y_1 \, y_2 \, y_3^3 - 18 \, i \, d\gamma^2 \, y_1 \, y_2 \, y_3^3 - 84 \, h_1 \, y_1 \, y_2 \, y_3^3 - 12 \, d\gamma \, h_1 \, y_1 \, y_2 \, y_3^3 +$
$168 \, h_2 \, y_1 \, y_2 \, y_3^3 + 24 \, d\gamma \, h_2 \, y_1 \, y_2 \, y_3^3 + 210 \, y_3^4 + 107 \, d\gamma \, y_3^4 + 18 \, d\gamma^2 \, y_3^4 + d\gamma^3 \, y_3^4 - 294 \, i \, h_1 \, y_3^4 -$
$91 \, i \, d\gamma \, h_1 \, y_3^4 - 7 \, i \, d\gamma^2 \, h_1 \, y_3^4 - 56 \, h_1^2 \, y_3^4 - 8 \, d\gamma \, h_1^2 \, y_3^4 + 210 \, i \, h_2 \, y_3^4 + 65 \, i \, d\gamma \, h_2 \, y_3^4 + 5 \, i \, d\gamma^2 \, h_2 \, y_3^4 +$
$140 \, h_1 \, h_2 \, y_3^4 + 20 \, d\gamma \, h_1 \, h_2 \, y_3^4 - 56 \, h_2^2 \, y_3^4 - 8 \, d\gamma \, h_2^2 \, y_3^4 - 14 \, x_1^2 \, y_3^4 - 2 \, d\gamma \, x_1^2 \, y_3^4 + 14 \, x_2^2 \, y_3^4 +$
$2 \, d\gamma \, x_2^2 \, y_3^4 + 42 \, x_3^2 \, y_3^4 + 6 \, d\gamma \, x_3^2 \, y_3^4 - 14 \, y_1^2 \, y_3^4 - 2 \, d\gamma \, y_1^2 \, y_3^4 + 14 \, y_2^2 \, y_3^4 + 2 \, d\gamma \, y_2^2 \, y_3^4 + 14 \, y_3^6 + 2 \, d\gamma \, y_3^6$

In[•]:= (* $Y^G_{\alpha_2}$ $\pi_{1,1}$ *)

$-\left(-\dfrac{1}{2} \, \left((2 \, y_2 - i \, 2 \, x_2) \, D[A[\![1, 1]\!], h_2] + (h_1 - 2 \, h_2) \, D[A[\![1, 1]\!], y_2] - \right.\right.$

$\qquad i \, (h_1 - 2 \, h_2) \, D[A[\![1, 1]\!], x_2] + (x_3 + i \, y_3) \, D[A[\![1, 1]\!], x_1] + (y_3 - i \, x_3) \, D[A[\![1, 1]\!], y_1] +$

$\qquad \left.\left. (-x_1 + i \, y_1) \, D[A[\![1, 1]\!], x_3] + (-y_1 - i \, x_1) \, D[A[\![1, 1]\!], y_3]) \right)\right)$ // Expand

In[ ]:=

$5040\,x_2 + 8028\,d\gamma\,x_2 + 5104\,d\gamma^2\,x_2 + 1665\,d\gamma^3\,x_2 + 295\,d\gamma^4\,x_2 + 27\,d\gamma^5\,x_2 + d\gamma^6\,x_2 + 7560\,\dot{\imath}\,h_1\,x_2 +$
$8262\,\dot{\imath}\,d\gamma\,h_1\,x_2 + 3525\,\dot{\imath}\,d\gamma^2\,h_1\,x_2 + 735\,\dot{\imath}\,d\gamma^3\,h_1\,x_2 + 75\,\dot{\imath}\,d\gamma^4\,h_1\,x_2 + 3\,\dot{\imath}\,d\gamma^5\,h_1\,x_2 - 840\,h_1^2\,x_2 -$
$638\,d\gamma\,h_1^2\,x_2 - 179\,d\gamma^2\,h_1^2\,x_2 - 22\,d\gamma^3\,h_1^2\,x_2 - d\gamma^4\,h_1^2\,x_2 + 630\,\dot{\imath}\,h_1^3\,x_2 + 321\,\dot{\imath}\,d\gamma\,h_1^3\,x_2 +$
$54\,\dot{\imath}\,d\gamma^2\,h_1^3\,x_2 + \boxed{\cdots\,2081\,\cdots} + 8\,d\gamma\,y_1\,y_2^2\,y_3^3 + 42\,x_2\,y_3^4 + 13\,d\gamma\,x_2\,y_3^4 + d\gamma^2\,x_2\,y_3^4 -$
$21\,\dot{\imath}\,h_1\,x_2\,y_3^4 - 3\,\dot{\imath}\,d\gamma\,h_1\,x_2\,y_3^4 + 21\,\dot{\imath}\,h_2\,x_2\,y_3^4 + 3\,\dot{\imath}\,d\gamma\,h_2\,x_2\,y_3^4 - 14\,x_1\,x_3\,y_3^4 - 2\,d\gamma\,x_1\,x_3\,y_3^4 +$
$14\,\dot{\imath}\,x_3\,y_1\,y_3^4 + 2\,\dot{\imath}\,d\gamma\,x_3\,y_1\,y_3^4 + 42\,\dot{\imath}\,y_2\,y_3^4 + 13\,\dot{\imath}\,d\gamma\,y_2\,y_3^4 + \dot{\imath}\,d\gamma^2\,y_2\,y_3^4 + 21\,h_1\,y_2\,y_3^4 +$
$3\,d\gamma\,h_1\,y_2\,y_3^4 - 21\,h_2\,y_2\,y_3^4 - 3\,d\gamma\,h_2\,y_2\,y_3^4 - 14\,\dot{\imath}\,x_1\,y_3^5 - 2\,\dot{\imath}\,d\gamma\,x_1\,y_3^5 - 14\,y_1\,y_3^5 - 2\,d\gamma\,y_1\,y_3^5$

large output   **show less**   **show more**   **show all**   **set size limit...**

Out[ ]= 0

In[ ]:= (* $\Upsilon^G{}_{\alpha_2}\ \pi_{1,1}$
     restrict to h_2, x_2, y_2
   *)
$-\left(-\dfrac{1}{2}\,(\,(2\,y_2 - \dot{\imath}\,2\,x_2)\,D[A[\![1, 1]\!], h_2] + (-2\,h_2)\,D[A[\![1, 1]\!], y_2] - \dot{\imath}\,(-2\,h_2)\,D[A[\![1, 1]\!], x_2])\right)$ //
   Expand

In[ ]:= $5040\,x_2 + 8028\,d\gamma\,x_2 + 5104\,d\gamma^2\,x_2 + 1665\,d\gamma^3\,x_2 + 295\,d\gamma^4\,x_2 + 27\,d\gamma^5\,x_2 + d\gamma^6\,x_2 + 4200\,h_2^2\,x_2 +$
$3190\,d\gamma\,h_2^2\,x_2 + 895\,d\gamma^2\,h_2^2\,x_2 + 110\,d\gamma^3\,h_2^2\,x_2 + 5\,d\gamma^4\,h_2^2\,x_2 + 168\,h_2^4\,x_2 + 52\,d\gamma\,h_2^4\,x_2 + 4\,d\gamma^2\,h_2^4\,x_2 +$
$4200\,x_2^3 + 3190\,d\gamma\,x_2^3 + 895\,d\gamma^2\,x_2^3 + 110\,d\gamma^3\,x_2^3 + 5\,d\gamma^4\,x_2^3 + 336\,h_2^2\,x_2^3 + 104\,d\gamma\,h_2^2\,x_2^3 + 8\,d\gamma^2\,h_2^2\,x_2^3 +$
$168\,x_2^5 + 52\,d\gamma\,x_2^5 + 4\,d\gamma^2\,x_2^5 + 5040\,\dot{\imath}\,y_2 + 8028\,\dot{\imath}\,d\gamma\,y_2 + 5104\,\dot{\imath}\,d\gamma^2\,y_2 + 1665\,\dot{\imath}\,d\gamma^3\,y_2 +$
$295\,\dot{\imath}\,d\gamma^4\,y_2 + 27\,\dot{\imath}\,d\gamma^5\,y_2 + \dot{\imath}\,d\gamma^6\,y_2 + 4200\,\dot{\imath}\,h_2^2\,y_2 + 3190\,\dot{\imath}\,d\gamma\,h_2^2\,y_2 + 895\,\dot{\imath}\,d\gamma^2\,h_2^2\,y_2 +$
$110\,\dot{\imath}\,d\gamma^3\,h_2^2\,y_2 + 5\,\dot{\imath}\,d\gamma^4\,h_2^2\,y_2 + 168\,\dot{\imath}\,h_2^4\,y_2 + 52\,\dot{\imath}\,d\gamma\,h_2^4\,y_2 + 4\,\dot{\imath}\,d\gamma^2\,h_2^4\,y_2 + 4200\,\dot{\imath}\,x_2^2\,y_2 +$
$3190\,\dot{\imath}\,d\gamma\,x_2^2\,y_2 + 895\,\dot{\imath}\,d\gamma^2\,x_2^2\,y_2 + 110\,\dot{\imath}\,d\gamma^3\,x_2^2\,y_2 + 5\,\dot{\imath}\,d\gamma^4\,x_2^2\,y_2 + 336\,\dot{\imath}\,h_2^2\,x_2^2\,y_2 + 104\,\dot{\imath}\,d\gamma\,h_2^2\,x_2^2\,y_2 +$
$8\,\dot{\imath}\,d\gamma^2\,h_2^2\,x_2^2\,y_2 + 168\,\dot{\imath}\,x_2^4\,y_2 + 52\,\dot{\imath}\,d\gamma\,x_2^4\,y_2 + 4\,\dot{\imath}\,d\gamma^2\,x_2^4\,y_2 + 4200\,x_2\,y_2^2 + 3190\,d\gamma\,x_2\,y_2^2 +$
$895\,d\gamma^2\,x_2\,y_2^2 + 110\,d\gamma^3\,x_2\,y_2^2 + 5\,d\gamma^4\,x_2\,y_2^2 + 336\,h_2^2\,x_2\,y_2^2 + 104\,d\gamma\,h_2^2\,x_2\,y_2^2 + 8\,d\gamma^2\,h_2^2\,x_2\,y_2^2 +$
$336\,x_2^3\,y_2^2 + 104\,d\gamma\,x_2^3\,y_2^2 + 8\,d\gamma^2\,x_2^3\,y_2^2 + 4200\,\dot{\imath}\,y_2^3 + 3190\,\dot{\imath}\,d\gamma\,y_2^3 + 895\,\dot{\imath}\,d\gamma^2\,y_2^3 + 110\,\dot{\imath}\,d\gamma^3\,y_2^3 +$
$5\,\dot{\imath}\,d\gamma^4\,y_2^3 + 336\,\dot{\imath}\,h_2^2\,y_2^3 + 104\,\dot{\imath}\,d\gamma\,h_2^2\,y_2^3 + 8\,\dot{\imath}\,d\gamma^2\,h_2^2\,y_2^3 + 336\,\dot{\imath}\,x_2^2\,y_2^3 + 104\,\dot{\imath}\,d\gamma\,x_2^2\,y_2^3 + 8\,\dot{\imath}\,d\gamma^2\,x_2^2\,y_2^3 +$
$168\,x_2\,y_2^4 + 52\,d\gamma\,x_2\,y_2^4 + 4\,d\gamma^2\,x_2\,y_2^4 + 168\,\dot{\imath}\,y_2^5 + 52\,\dot{\imath}\,d\gamma\,y_2^5 + 4\,\dot{\imath}\,d\gamma^2\,y_2^5 - A[\![1, 2]\!]$ // Expand

Out[ ]= 0

In[ ]:= (* $\Upsilon^G{}_{\alpha_2}\ \pi_{1,k}$ *)
   k = 2;
$-\left(-\dfrac{1}{2}\,(\,(2\,y_2 - \dot{\imath}\,2\,x_2)\,D[A[\![1, k]\!], h_2] + (h_1 - 2\,h_2)\,D[A[\![1, k]\!], y_2] -\right.$
$\dot{\imath}\,(h_1 - 2\,h_2)\,D[A[\![1, k]\!], x_2] + (x_3 + \dot{\imath}\,y_3)\,D[A[\![1, k]\!], x_1] + (y_3 - \dot{\imath}\,x_3)\,D[A[\![1, k]\!], y_1] +$
$\left.(-x_1 + \dot{\imath}\,y_1)\,D[A[\![1, k]\!], x_3] + (-y_1 - \dot{\imath}\,x_1)\,D[A[\![1, k]\!], y_3])\right)$ // Expand

$In[\bullet]:=$

$7560\ x_1\ x_2 + 8262\ d\gamma\ x_1\ x_2 + 3525\ d\gamma^2\ x_1\ x_2 + 735\ d\gamma^3\ x_1\ x_2 + 75\ d\gamma^4\ x_1\ x_2 + 3\ d\gamma^5\ x_1\ x_2 +$
$2520\ i\ h_1\ x_1\ x_2 + 1914\ i\ d\gamma\ h_1\ x_1\ x_2 + 537\ i\ d\gamma^2\ h_1\ x_1\ x_2 + 66\ i\ d\gamma^3\ h_1\ x_1\ x_2 +$
$3\ i\ d\gamma^4\ h_1\ x_1\ x_2 + 1890\ h_1^2\ x_1\ x_2 + 963\ d\gamma\ h_1^2\ x_1\ x_2 + 162\ d\gamma^2\ h_1^2\ x_1\ x_2 + 9\ d\gamma^3\ h_1^2\ x_1\ x_2 +$
$126\ i\ h_1^3\ x_1\ x_2 + 39\ i\ d\gamma\ h_1^3\ x_1\ x_2 + 3\ i\ d\gamma^2\ h_1^3\ x_1\ x_2 + 42\ h_1^4\ x_1\ x_2 + 6\ d\gamma\ h_1^4\ x_1\ x_2 +$
$5040\ i\ h_2\ x_1\ x_2 + 3828\ i\ d\gamma\ h_2\ x_1\ x_2 + 1074\ i\ d\gamma^2\ h_2\ x_1\ x_2 + 132\ i\ d\gamma^3\ h_2\ x_1\ x_2 +$
$\boxed{\cdots\ 2382\ \cdots} + 19\ d\gamma\ h_1\ y_2^2\ y_3^3 - 98\ h_2\ y_2^2\ y_3^3 - 14\ d\gamma\ h_2\ y_2^2\ y_3^3 + 84\ x_1\ x_2\ y_3^4 + 12\ d\gamma\ x_1\ x_2\ y_3^4 +$
$42\ x_3\ y_3^4 + 13\ d\gamma\ x_3\ y_3^4 + d\gamma^2\ x_3\ y_3^4 + 7\ i\ h_1\ x_3\ y_3^4 + i\ d\gamma\ h_1\ x_3\ y_3^4 + 7\ i\ h_2\ x_3\ y_3^4 +$
$i\ d\gamma\ h_2\ x_3\ y_3^4 - 42\ i\ x_2\ y_1\ y_3^4 - 6\ i\ d\gamma\ x_2\ y_1\ y_3^4 - 42\ i\ x_1\ y_2\ y_3^4 - 6\ i\ d\gamma\ x_1\ y_2\ y_3^4 - 84\ y_1\ y_2\ y_3^4 -$
$12\ d\gamma\ y_1\ y_2\ y_3^4 + 42\ i\ y_3^5 + 13\ i\ d\gamma\ y_3^5 + i\ d\gamma^2\ y_3^5 - 7\ h_1\ y_3^5 - d\gamma\ h_1\ y_3^5 - 7\ h_2\ y_3^5 - d\gamma\ h_2\ y_3^5$

large output   **show less**   **show more**   **show all**   **set size limit...**

$Out[\bullet]=$ 0

$In[\bullet]:=$ $(*\ Y^G_{\alpha_2}\ \pi_{1,k}\ *)$
$k = 3;$
$-\left(-\dfrac{1}{2}\ (\ (2\ y_2 - i\ 2\ x_2)\ D[A[\![1,\ k]\!],\ h_2]\ +\ (h_1 - 2\ h_2)\ D[A[\![1,\ k]\!],\ y_2]\ -\right.$
$\quad i\ (h_1 - 2\ h_2)\ D[A[\![1,\ k]\!],\ x_2] + (x_3 + i\ y_3)\ D[A[\![1,\ k]\!],\ x_1]\ +\ (y_3 - i\ x_3)\ D[A[\![1,\ k]\!],\ y_1]\ +$
$\left. (-x_1 + i\ y_1)\ D[A[\![1,\ k]\!],\ x_3]\ +\ (-y_1 - i\ x_1)\ D[A[\![1,\ k]\!],\ y_3])\right)\ //\ \text{Expand}$

$Out[\bullet]=$ 0

$In[\bullet]:=$ $(*\ Y^G_{\alpha_2}\ \pi_{1,k}\ *)$
$k = 4;$
$-\left(-\dfrac{1}{2}\ (\ (2\ y_2 - i\ 2\ x_2)\ D[A[\![1,\ k]\!],\ h_2]\ +\ (h_1 - 2\ h_2)\ D[A[\![1,\ k]\!],\ y_2]\ -\right.$
$\quad i\ (h_1 - 2\ h_2)\ D[A[\![1,\ k]\!],\ x_2] + (x_3 + i\ y_3)\ D[A[\![1,\ k]\!],\ x_1]\ +\ (y_3 - i\ x_3)\ D[A[\![1,\ k]\!],\ y_1]\ +$
$\left. (-x_1 + i\ y_1)\ D[A[\![1,\ k]\!],\ x_3]\ +\ (-y_1 - i\ x_1)\ D[A[\![1,\ k]\!],\ y_3])\right)\ //\ \text{Expand}$

$In[\bullet]:=$

$5040\ x_1\ x_2^2 + 3828\ d\gamma\ x_1\ x_2^2 + 1074\ d\gamma^2\ x_1\ x_2^2 + 132\ d\gamma^3\ x_1\ x_2^2 + 6\ d\gamma^4\ x_1\ x_2^2 + 2520\ i\ h_1\ x_1\ x_2^2 +$
$1284\ i\ d\gamma\ h_1\ x_1\ x_2^2 + 216\ i\ d\gamma^2\ h_1\ x_1\ x_2^2 + 12\ i\ d\gamma^3\ h_1\ x_1\ x_2^2 + 252\ h_1^2\ x_1\ x_2^2 + 78\ d\gamma\ h_1^2\ x_1\ x_2^2 +$
$6\ d\gamma^2\ h_1^2\ x_1\ x_2^2 + 84\ i\ h_1^3\ x_1\ x_2^2 + 12\ i\ d\gamma\ h_1^3\ x_1\ x_2^2 - 252\ h_1\ h_2\ x_1\ x_2^2 - 78\ d\gamma\ h_1\ h_2\ x_1\ x_2^2 -$
$6\ d\gamma^2\ h_1\ h_2\ x_1\ x_2^2 + 42\ i\ h_1^2\ h_2\ x_1\ x_2^2 + 6\ i\ d\gamma\ h_1^2\ h_2\ x_1\ x_2^2 + 252\ h_2^2\ x_1\ x_2^2 + 78\ d\gamma\ h_2^2\ x_1\ x_2^2 +$
$6\ d\gamma^2\ h_2^2\ x_1\ x_2^2 - 42\ i\ h_1\ h_2^2\ x_1\ x_2^2 - 6\ i\ d\gamma\ h_1\ h_2^2\ x_1\ x_2^2 + \boxed{\cdots\ 2068\ \cdots} + 42\ i\ h_1\ x_1\ y_3^4 +$
$6\ i\ d\gamma\ h_1\ x_1\ y_3^4 - 42\ i\ h_2\ x_1\ y_3^4 - 6\ i\ d\gamma\ h_2\ x_1\ y_3^4 + 28\ x_2\ x_3\ y_3^4 + 4\ d\gamma\ x_2\ x_3\ y_3^4 + 252\ i\ y_1\ y_3^4 +$
$78\ i\ d\gamma\ y_1\ y_3^4 + 6\ i\ d\gamma^2\ y_1\ y_3^4 + 42\ h_1\ y_1\ y_3^4 + 6\ d\gamma\ h_1\ y_1\ y_3^4 - 42\ h_2\ y_1\ y_3^4 - 6\ d\gamma\ h_2\ y_1\ y_3^4 +$
$28\ i\ x_3\ y_2\ y_3^4 + 4\ i\ d\gamma\ x_3\ y_2\ y_3^4 + 28\ i\ x_2\ y_3^5 + 4\ i\ d\gamma\ x_2\ y_3^5 - 28\ y_2\ y_3^5 - 4\ d\gamma\ y_2\ y_3^5$

large output   **show less**   **show more**   **show all**   **set size limit...**

$Out[\bullet]=$ 0

$In[\bullet]:=$ (* $Y^G_{\alpha_2}$ $\pi_{1,k}$ *)
$\quad$ k = 5;
$\quad -\left(-\dfrac{1}{2}\ (\ (2\,y_2 - \dot{\mathbb{1}}\,2\,x_2)\ D[A[\![1,\,k]\!],\,h_2]\ +\ (h_1 - 2\,h_2)\ D[A[\![1,\,k]\!],\,y_2]\ -\right.$
$\qquad\qquad \dot{\mathbb{1}}\ (h_1 - 2\,h_2)\ D[A[\![1,\,k]\!],\,x_2] + (x_3 + \dot{\mathbb{1}}\,y_3)\ D[A[\![1,\,k]\!],\,x_1]\ +\ (y_3 - \dot{\mathbb{1}}\,x_3)\ D[A[\![1,\,k]\!],\,y_1]\ +$
$\qquad\qquad \left.(-x_1 + \dot{\mathbb{1}}\,y_1)\ D[A[\![1,\,k]\!],\,x_3]\ +\ (-y_1 - \dot{\mathbb{1}}\,x_1)\ D[A[\![1,\,k]\!],\,y_3])\right)$ // Expand

$In[\bullet]:=$
> $2520\,x_1\,x_2^2 + 1914\,d\gamma\,x_1\,x_2^2 + 537\,d\gamma^2\,x_1\,x_2^2 + 66\,d\gamma^3\,x_1\,x_2^2 + 3\,d\gamma^4\,x_1\,x_2^2 + 1260\,\dot{\mathbb{1}}\,h_1\,x_1\,x_2^2 +$
> $642\,\dot{\mathbb{1}}\,d\gamma\,h_1\,x_1\,x_2^2 + 108\,\dot{\mathbb{1}}\,d\gamma^2\,h_1\,x_1\,x_2^2 + 6\,\dot{\mathbb{1}}\,d\gamma^3\,h_1\,x_1\,x_2^2 + 126\,h_1^2\,x_1\,x_2^2 + 39\,d\gamma\,h_1^2\,x_1\,x_2^2 +$
> $3\,d\gamma^2\,h_1^2\,x_1\,x_2^2 + 42\,\dot{\mathbb{1}}\,h_1^3\,x_1\,x_2^2 + 6\,\dot{\mathbb{1}}\,d\gamma\,h_1^3\,x_1\,x_2^2 - 126\,h_1\,h_2\,x_1\,x_2^2 - 39\,d\gamma\,h_1\,h_2\,x_1\,x_2^2 -$
> $3\,d\gamma^2\,h_1\,h_2\,x_1\,x_2^2 + 21\,\dot{\mathbb{1}}\,h_1^2\,h_2\,x_1\,x_2^2 + 3\,\dot{\mathbb{1}}\,d\gamma\,h_1^2\,h_2\,x_1\,x_2^2 + 126\,h_2^2\,x_1\,x_2^2 + 39\,d\gamma\,h_2^2\,x_1\,x_2^2 +$
> $3\,d\gamma^2\,h_2^2\,x_1\,x_2^2 - 21\,\dot{\mathbb{1}}\,h_1\,h_2^2\,x_1\,x_2^2 - 3\,\dot{\mathbb{1}}\,d\gamma\,h_1\,h_2^2\,x_1\,x_2^2 + 126\,x_1^3\,x_2^2 + \boxed{\cdots\ 2067\ \cdots}\ +$
> $21\,\dot{\mathbb{1}}\,h_1\,x_1\,y_3^4 + 3\,\dot{\mathbb{1}}\,d\gamma\,h_1\,x_1\,y_3^4 - 21\,\dot{\mathbb{1}}\,h_2\,x_1\,y_3^4 - 3\,\dot{\mathbb{1}}\,d\gamma\,h_2\,x_1\,y_3^4 + 14\,x_2\,x_3\,y_3^4 + 2\,d\gamma\,x_2\,x_3\,y_3^4 +$
> $126\,\dot{\mathbb{1}}\,y_1\,y_3^4 + 39\,\dot{\mathbb{1}}\,d\gamma\,y_1\,y_3^4 + 3\,\dot{\mathbb{1}}\,d\gamma^2\,y_1\,y_3^4 + 21\,h_1\,y_1\,y_3^4 + 3\,d\gamma\,h_1\,y_1\,y_3^4 - 21\,h_2\,y_1\,y_3^4 -$
> $3\,d\gamma\,h_2\,y_1\,y_3^4 + 14\,\dot{\mathbb{1}}\,x_3\,y_2\,y_3^4 + 2\,\dot{\mathbb{1}}\,d\gamma\,x_3\,y_2\,y_3^4 + 14\,\dot{\mathbb{1}}\,x_2\,y_3^5 + 2\,\dot{\mathbb{1}}\,d\gamma\,x_2\,y_3^5 - 14\,y_2\,y_3^5 - 2\,d\gamma\,y_2\,y_3^5$
>
> large output $\quad$ **show less** $\quad$ **show more** $\quad$ **show all** $\quad$ **set size limit...**

$Out[\bullet]=$ 0

$In[\bullet]:=$ (* $Y^G_{\alpha_2}$ $\pi_{1,k}$ *)
$\quad$ k = 6;
$\quad -\left(-\dfrac{1}{2}\ (\ (2\,y_2 - \dot{\mathbb{1}}\,2\,x_2)\ D[A[\![1,\,k]\!],\,h_2]\ +\ (h_1 - 2\,h_2)\ D[A[\![1,\,k]\!],\,y_2]\ -\right.$
$\qquad\qquad \dot{\mathbb{1}}\ (h_1 - 2\,h_2)\ D[A[\![1,\,k]\!],\,x_2] + (x_3 + \dot{\mathbb{1}}\,y_3)\ D[A[\![1,\,k]\!],\,x_1]\ +\ (y_3 - \dot{\mathbb{1}}\,x_3)\ D[A[\![1,\,k]\!],\,y_1]\ +$
$\qquad\qquad \left.(-x_1 + \dot{\mathbb{1}}\,y_1)\ D[A[\![1,\,k]\!],\,x_3]\ +\ (-y_1 - \dot{\mathbb{1}}\,x_1)\ D[A[\![1,\,k]\!],\,y_3])\right)$ // Expand

$Out[\bullet]=$ 0

$In[\bullet]:=$ (* $Y^G_{\alpha_2}$ $\pi_{1,k}$ *)
$\quad$ k = 7;
$\quad -\left(-\dfrac{1}{2}\ (\ (2\,y_2 - \dot{\mathbb{1}}\,2\,x_2)\ D[A[\![1,\,k]\!],\,h_2]\ +\ (h_1 - 2\,h_2)\ D[A[\![1,\,k]\!],\,y_2]\ -\right.$
$\qquad\qquad \dot{\mathbb{1}}\ (h_1 - 2\,h_2)\ D[A[\![1,\,k]\!],\,x_2] + (x_3 + \dot{\mathbb{1}}\,y_3)\ D[A[\![1,\,k]\!],\,x_1]\ +\ (y_3 - \dot{\mathbb{1}}\,x_3)\ D[A[\![1,\,k]\!],\,y_1]\ +$
$\qquad\qquad \left.(-x_1 + \dot{\mathbb{1}}\,y_1)\ D[A[\![1,\,k]\!],\,x_3]\ +\ (-y_1 - \dot{\mathbb{1}}\,x_1)\ D[A[\![1,\,k]\!],\,y_3])\right)$ // Expand

$In[\bullet]:=$ $1260\,x_1^2\,x_2^2 + 642\,d\gamma\,x_1^2\,x_2^2 + 108\,d\gamma^2\,x_1^2\,x_2^2 + 6\,d\gamma^3\,x_1^2\,x_2^2 + 42\,h_1^2\,x_1^2\,x_2^2 + 6\,d\gamma\,h_1^2\,x_1^2\,x_2^2 - 42\,h_1\,h_2\,x_1^2\,x_2^2 -$
$\quad 6\,d\gamma\,h_1\,h_2\,x_1^2\,x_2^2 + 42\,h_2^2\,x_1^2\,x_2^2 + 6\,d\gamma\,h_2^2\,x_1^2\,x_2^2 + 42\,x_1^4\,x_2^2 + 6\,d\gamma\,x_1^4\,x_2^2 + 42\,x_1^2\,x_2^4 + 6\,d\gamma\,x_1^2\,x_2^4 +$
$\quad 2520\,\dot{\mathbb{1}}\,h_1\,x_1\,x_2\,x_3 + 1284\,\dot{\mathbb{1}}\,d\gamma\,h_1\,x_1\,x_2\,x_3 + 216\,\dot{\mathbb{1}}\,d\gamma^2\,h_1\,x_1\,x_2\,x_3 + 12\,\dot{\mathbb{1}}\,d\gamma^3\,h_1\,x_1\,x_2\,x_3 +$
$\quad 84\,\dot{\mathbb{1}}\,h_1^3\,x_1\,x_2\,x_3 + 12\,\dot{\mathbb{1}}\,d\gamma\,h_1^3\,x_1\,x_2\,x_3 - 2520\,\dot{\mathbb{1}}\,h_2\,x_1\,x_2\,x_3 - 1284\,\dot{\mathbb{1}}\,d\gamma\,h_2\,x_1\,x_2\,x_3 - 216\,\dot{\mathbb{1}}\,d\gamma^2\,h_2\,x_1\,x_2\,x_3 -$
$\quad 12\,\dot{\mathbb{1}}\,d\gamma^3\,h_2\,x_1\,x_2\,x_3 - 294\,\dot{\mathbb{1}}\,h_1^2\,h_2\,x_1\,x_2\,x_3 - 42\,\dot{\mathbb{1}}\,d\gamma\,h_1^2\,h_2\,x_1\,x_2\,x_3 + 294\,\dot{\mathbb{1}}\,h_1\,h_2^2\,x_1\,x_2\,x_3 +$
$\quad 42\,\dot{\mathbb{1}}\,d\gamma\,h_1\,h_2^2\,x_1\,x_2\,x_3 - 84\,\dot{\mathbb{1}}\,h_2^3\,x_1\,x_2\,x_3 - 12\,\dot{\mathbb{1}}\,d\gamma\,h_2^3\,x_1\,x_2\,x_3 + 84\,\dot{\mathbb{1}}\,h_1\,x_1^3\,x_2\,x_3 + 12\,\dot{\mathbb{1}}\,d\gamma\,h_1\,x_1^3\,x_2\,x_3 -$
$\quad 210\,\dot{\mathbb{1}}\,h_2\,x_1^3\,x_2\,x_3 - 30\,\dot{\mathbb{1}}\,d\gamma\,h_2\,x_1^3\,x_2\,x_3 + 210\,\dot{\mathbb{1}}\,h_1\,x_1\,x_2^3\,x_3 + 30\,\dot{\mathbb{1}}\,d\gamma\,h_1\,x_1\,x_2^3\,x_3 - 84\,\dot{\mathbb{1}}\,h_2\,x_1\,x_2^3\,x_3 -$
$\quad 12\,\dot{\mathbb{1}}\,d\gamma\,h_2\,x_1\,x_2^3\,x_3 - 5040\,x_3^2 - 5508\,d\gamma\,x_3^2 - 2350\,d\gamma^2\,x_3^2 - 490\,d\gamma^3\,x_3^2 - 50\,d\gamma^4\,x_3^2 - 2\,d\gamma^5\,x_3^2 -$
$\quad 2100\,h_1^2\,x_3^2 - 1070\,d\gamma\,h_1^2\,x_3^2 - 180\,d\gamma^2\,h_1^2\,x_3^2 - 10\,d\gamma^3\,h_1^2\,x_3^2 - 56\,h_1^4\,x_3^2 - 8\,d\gamma\,h_1^4\,x_3^2 + 3360\,h_1\,h_2\,x_3^2 +$
$\quad 1712\,d\gamma\,h_1\,h_2\,x_3^2 + 288\,d\gamma^2\,h_1\,h_2\,x_3^2 + 16\,d\gamma^3\,h_1\,h_2\,x_3^2 + 280\,h_1^3\,h_2\,x_3^2 + 40\,d\gamma\,h_1^3\,h_2\,x_3^2 - 2100\,h_2^2\,x_3^2 -$
$\quad 1070\,d\gamma\,h_2^2\,x_3^2 - 180\,d\gamma^2\,h_2^2\,x_3^2 - 10\,d\gamma^3\,h_2^2\,x_3^2 - 462\,h_1^2\,h_2^2\,x_3^2 - 66\,d\gamma\,h_1^2\,h_2^2\,x_3^2 + 280\,h_1\,h_2^3\,x_3^2 +$

$$40\, d\gamma\, h_1 h_2^3 x_3^2 - 56\, h_2^4 x_3^2 - 8\, d\gamma\, h_2^4 x_3^2 - 840\, x_1^2 x_3^2 - 428\, d\gamma\, x_1^2 x_3^2 - 72\, d\gamma^2 x_1^2 x_3^2 - 4\, d\gamma^3 x_1^2 x_3^2 -$$

$$70\, h_1^2 x_1^2 x_3^2 - 10\, d\gamma\, h_1^2 x_1^2 x_3^2 + 238\, h_1 h_2 x_1^2 x_3^2 + 34\, d\gamma\, h_1 h_2 x_1^2 x_3^2 - 196\, h_2^2 x_1^2 x_3^2 - 28\, d\gamma\, h_2^2 x_1^2 x_3^2 -$$

$$14\, x_1^4 x_3^2 - 2\, d\gamma\, x_1^4 x_3^2 - 840\, x_2^2 x_3^2 - 428\, d\gamma\, x_2^2 x_3^2 - 72\, d\gamma^2 x_2^2 x_3^2 - 4\, d\gamma^3 x_2^2 x_3^2 - 196\, h_1^2 x_2^2 x_3^2 -$$

$$28\, d\gamma\, h_1^2 x_2^2 x_3^2 + 238\, h_1 h_2 x_2^2 x_3^2 + 34\, d\gamma\, h_1 h_2 x_2^2 x_3^2 - 70\, h_2^2 x_2^2 x_3^2 - 10\, d\gamma\, h_2^2 x_2^2 x_3^2 + 14\, x_1^2 x_2^2 x_3^2 +$$

$$2\, d\gamma\, x_1^2 x_2^2 x_3^2 - 14\, x_2^4 x_3^2 - 2\, d\gamma\, x_2^4 x_3^2 - 42\, i\, h_1 x_1 x_2 x_3^2 - 6\, i\, d\gamma\, h_1 x_1 x_2 x_3^2 + 42\, i\, h_2 x_1 x_2 x_3^2 +$$

$$6\, i\, d\gamma\, h_2 x_1 x_2 x_3^2 - 840\, x_3^4 - 428\, d\gamma\, x_3^4 - 72\, d\gamma^2 x_3^4 - 4\, d\gamma^3 x_3^4 + 56\, h_1^2 x_3^4 + 8\, d\gamma\, h_1^2 x_3^4 - 140\, h_1 h_2 x_3^4 -$$

$$20\, d\gamma\, h_1 h_2 x_3^4 + 56\, h_2^2 x_3^4 + 8\, d\gamma\, h_2^2 x_3^4 - 28\, x_1^2 x_3^4 - 4\, d\gamma\, x_1^2 x_3^4 - 28\, x_2^2 x_3^4 - 4\, d\gamma\, x_2^2 x_3^4 - 14\, x_3^6 -$$

$$2\, d\gamma\, x_3^6 + 2520\, i\, x_1 x_2^2 y_1 + 1284\, i\, d\gamma\, x_1 x_2^2 y_1 + 216\, i\, d\gamma^2 x_1 x_2^2 y_1 + 12\, i\, d\gamma^3 x_1 x_2^2 y_1 +$$

$$84\, i\, h_1^2 x_1 x_2^2 y_1 + 12\, i\, d\gamma\, h_1^2 x_1 x_2^2 y_1 - 84\, i\, h_1 h_2 x_1 x_2^2 y_1 - 12\, i\, d\gamma\, h_1 h_2 x_1 x_2^2 y_1 + 84\, i\, h_2^2 x_1 x_2^2 y_1 +$$

$$12\, i\, d\gamma\, h_2^2 x_1 x_2^2 y_1 + 84\, i\, x_1^3 x_2^2 y_1 + 12\, i\, d\gamma\, x_1^3 x_2^2 y_1 + 84\, i\, x_1 x_2^4 y_1 + 12\, i\, d\gamma\, x_1 x_2^4 y_1 -$$

$$2520\, h_1 x_2 x_3 y_1 - 1284\, d\gamma\, h_1 x_2 x_3 y_1 - 216\, d\gamma^2 h_1 x_2 x_3 y_1 - 12\, d\gamma^3 h_1 x_2 x_3 y_1 - 84\, h_1^3 x_2 x_3 y_1 -$$

$$12\, d\gamma\, h_1^3 x_2 x_3 y_1 + 2520\, h_2 x_2 x_3 y_1 + 1284\, d\gamma\, h_2 x_2 x_3 y_1 + 216\, d\gamma^2 h_2 x_2 x_3 y_1 + 12\, d\gamma^3 h_2 x_2 x_3 y_1 +$$

$$294\, h_1^2 h_2 x_2 x_3 y_1 + 42\, d\gamma\, h_1^2 h_2 x_2 x_3 y_1 - 294\, h_1 h_2^2 x_2 x_3 y_1 - 42\, d\gamma\, h_1 h_2^2 x_2 x_3 y_1 + 84\, h_2^3 x_2 x_3 y_1 +$$

$$12\, d\gamma\, h_2^3 x_2 x_3 y_1 - 84\, h_1 x_1^2 x_2 x_3 y_1 - 12\, d\gamma\, h_1 x_1^2 x_2 x_3 y_1 + 210\, h_2 x_1^2 x_2 x_3 y_1 + 30\, d\gamma\, h_2 x_1^2 x_2 x_3 y_1 -$$

$$210\, h_1 x_2^3 x_3 y_1 - 30\, d\gamma\, h_1 x_2^3 x_3 y_1 + 84\, h_2 x_2^3 x_3 y_1 + 12\, d\gamma\, h_2 x_2^3 x_3 y_1 - 168\, i\, x_1 x_2^2 x_3^2 y_1 -$$

$$24\, i\, d\gamma\, x_1 x_2^2 x_3^2 y_1 + 294\, h_1 x_2 x_3^3 y_1 + 42\, d\gamma\, h_1 x_2 x_3^3 y_1 - 294\, h_2 x_2 x_3^3 y_1 - 42\, d\gamma\, h_2 x_2 x_3^3 y_1 -$$

$$1260\, x_2^2 y_1^2 - 642\, d\gamma\, x_2^2 y_1^2 - 108\, d\gamma^2 x_2^2 y_1^2 - 6\, d\gamma^3 x_2^2 y_1^2 - 42\, h_1^2 x_2^2 y_1^2 - 6\, d\gamma\, h_1^2 x_2^2 y_1^2 + 42\, h_1 h_2 x_2^2 y_1^2 +$$

$$6\, d\gamma\, h_1 h_2 x_2^2 y_1^2 - 42\, h_2^2 x_2^2 y_1^2 - 6\, d\gamma\, h_2^2 x_2^2 y_1^2 - 42\, x_2^4 y_1^2 - 6\, d\gamma\, x_2^4 y_1^2 + 84\, i\, h_1 x_1 x_2 x_3 y_1^2 +$$

$$12\, i\, d\gamma\, h_1 x_1 x_2 x_3 y_1^2 - 210\, i\, h_2 x_1 x_2 x_3 y_1^2 - 30\, i\, d\gamma\, h_2 x_1 x_2 x_3 y_1^2 - 840\, x_3^2 y_1^2 - 428\, d\gamma\, x_3^2 y_1^2 -$$

$$72\, d\gamma^2 x_3^2 y_1^2 - 4\, d\gamma^3 x_3^2 y_1^2 - 70\, h_1^2 x_3^2 y_1^2 - 10\, d\gamma\, h_1^2 x_3^2 y_1^2 + 238\, h_1 h_2 x_3^2 y_1^2 + 34\, d\gamma\, h_1 h_2 x_3^2 y_1^2 -$$

$$196\, h_2^2 x_3^2 y_1^2 - 28\, d\gamma\, h_2^2 x_3^2 y_1^2 - 28\, x_1^2 x_3^2 y_1^2 - 4\, d\gamma\, x_1^2 x_3^2 y_1^2 + 182\, x_2^2 x_3^2 y_1^2 + 26\, d\gamma\, x_2^2 x_3^2 y_1^2 - 28\, x_3^4 y_1^2 -$$

$$4\, d\gamma\, x_3^4 y_1^2 + 84\, i\, x_1 x_2^2 y_1^3 + 12\, i\, d\gamma\, x_1 x_2^2 y_1^3 - 84\, h_1 x_2 x_3 y_1^3 - 12\, d\gamma\, h_1 x_2 x_3 y_1^3 + 210\, h_2 x_2 x_3 y_1^3 +$$

$$30\, d\gamma\, h_2 x_2 x_3 y_1^3 - 42\, x_2^2 y_1^4 - 6\, d\gamma\, x_2^2 y_1^4 - 14\, x_3^2 y_1^4 - 2\, d\gamma\, x_3^2 y_1^4 + 2520\, i\, x_1^2 x_2 y_2 + 1284\, i\, d\gamma\, x_1^2 x_2 y_2 +$$

$$216\, i\, d\gamma^2 x_1^2 x_2 y_2 + 12\, i\, d\gamma^3 x_1^2 x_2 y_2 + 84\, i\, h_1^2 x_1^2 x_2 y_2 + 12\, i\, d\gamma\, h_1^2 x_1^2 x_2 y_2 - 84\, i\, h_1 h_2 x_1^2 x_2 y_2 -$$

$$12\, i\, d\gamma\, h_1 h_2 x_1^2 x_2 y_2 + 84\, i\, h_2^2 x_1^2 x_2 y_2 + 12\, i\, d\gamma\, h_2^2 x_1^2 x_2 y_2 + 84\, i\, x_1^4 x_2 y_2 + 12\, i\, d\gamma\, x_1^4 x_2 y_2 +$$

$$84\, i\, x_1^2 x_2^3 y_2 + 12\, i\, d\gamma\, x_1^2 x_2^3 y_2 - 2520\, h_1 x_1 x_3 y_2 - 1284\, d\gamma\, h_1 x_1 x_3 y_2 - 216\, d\gamma^2 h_1 x_1 x_3 y_2 -$$

$$12\, d\gamma^3 h_1 x_1 x_3 y_2 - 84\, h_1^3 x_1 x_3 y_2 - 12\, d\gamma\, h_1^3 x_1 x_3 y_2 + 2520\, h_2 x_1 x_3 y_2 + 1284\, d\gamma\, h_2 x_1 x_3 y_2 +$$

$$216\, d\gamma^2 h_2 x_1 x_3 y_2 + 12\, d\gamma^3 h_2 x_1 x_3 y_2 + 294\, h_1^2 h_2 x_1 x_3 y_2 + 42\, d\gamma\, h_1^2 h_2 x_1 x_3 y_2 - 294\, h_1 h_2^2 x_1 x_3 y_2 -$$

$$42\, d\gamma\, h_1 h_2^2 x_1 x_3 y_2 + 84\, h_2^3 x_1 x_3 y_2 + 12\, d\gamma\, h_2^3 x_1 x_3 y_2 - 84\, h_1 x_1^3 x_3 y_2 - 12\, d\gamma\, h_1 x_1^3 x_3 y_2 +$$

$$210\, h_2 x_1^3 x_3 y_2 + 30\, d\gamma\, h_2 x_1^3 x_3 y_2 - 210\, h_1 x_1 x_2^2 x_3 y_2 - 30\, d\gamma\, h_1 x_1 x_2^2 x_3 y_2 + 84\, h_2 x_1 x_2^2 x_3 y_2 +$$

$$12\, d\gamma\, h_2 x_1 x_2^2 x_3 y_2 - 168\, i\, x_1^2 x_2 x_3^2 y_2 - 24\, i\, d\gamma\, x_1^2 x_2 x_3^2 y_2 + 294\, h_1 x_1 x_3^3 y_2 + 42\, d\gamma\, h_1 x_1 x_3^3 y_2 -$$

$$294\, h_2 x_1 x_3^3 y_2 - 42\, d\gamma\, h_2 x_1 x_3^3 y_2 - 5040\, x_1 x_2 y_1 y_2 - 2568\, d\gamma\, x_1 x_2 y_1 y_2 - 432\, d\gamma^2 x_1 x_2 y_1 y_2 -$$

$$24\, d\gamma^3 x_1 x_2 y_1 y_2 - 168\, h_1^2 x_1 x_2 y_1 y_2 - 24\, d\gamma\, h_1^2 x_1 x_2 y_1 y_2 + 168\, h_1 h_2 x_1 x_2 y_1 y_2 +$$

$$24\, d\gamma\, h_1 h_2 x_1 x_2 y_1 y_2 - 168\, h_2^2 x_1 x_2 y_1 y_2 - 24\, d\gamma\, h_2^2 x_1 x_2 y_1 y_2 - 168\, x_1^3 x_2 y_1 y_2 - 24\, d\gamma\, x_1^3 x_2 y_1 y_2 -$$

$$168\, x_1 x_2^3 y_1 y_2 - 24\, d\gamma\, x_1 x_2^3 y_1 y_2 - 2520\, i\, h_1 x_3 y_1 y_2 - 1284\, i\, d\gamma\, h_1 x_3 y_1 y_2 - 216\, i\, d\gamma^2 h_1 x_3 y_1 y_2 -$$

$$12\, i\, d\gamma^3 h_1 x_3 y_1 y_2 - 84\, i\, h_1^3 x_3 y_1 y_2 - 12\, i\, d\gamma\, h_1^3 x_3 y_1 y_2 + 2520\, i\, h_2 x_3 y_1 y_2 + 1284\, i\, d\gamma\, h_2 x_3 y_1 y_2 +$$

$$216\, i\, d\gamma^2 h_2 x_3 y_1 y_2 + 12\, i\, d\gamma^3 h_2 x_3 y_1 y_2 + 294\, i\, h_1^2 h_2 x_3 y_1 y_2 + 42\, i\, d\gamma\, h_1^2 h_2 x_3 y_1 y_2 -$$

$$294\, i\, h_1 h_2^2 x_3 y_1 y_2 - 42\, i\, d\gamma\, h_1 h_2^2 x_3 y_1 y_2 + 84\, i\, h_2^3 x_3 y_1 y_2 + 12\, i\, d\gamma\, h_2^3 x_3 y_1 y_2 -$$

$$84\, i\, h_1 x_1^2 x_3 y_1 y_2 - 12\, i\, d\gamma\, h_1 x_1^2 x_3 y_1 y_2 + 210\, i\, h_2 x_1^2 x_3 y_1 y_2 + 30\, i\, d\gamma\, h_2 x_1^2 x_3 y_1 y_2 -$$

$$210\, i\, h_1 x_2^2 x_3 y_1 y_2 - 30\, i\, d\gamma\, h_1 x_2^2 x_3 y_1 y_2 + 84\, i\, h_2 x_2^2 x_3 y_1 y_2 + 12\, i\, d\gamma\, h_2 x_2^2 x_3 y_1 y_2 +$$

$$336\, x_1 x_2 x_3^2 y_1 y_2 + 48\, d\gamma\, x_1 x_2 x_3^2 y_1 y_2 + 42\, i\, h_1 x_3^3 y_1 y_2 + 6\, i\, d\gamma\, h_1 x_3^3 y_1 y_2 - 42\, i\, h_2 x_3^3 y_1 y_2 -$$

$$6\, i\, d\gamma\, h_2 x_3^3 y_1 y_2 - 2520\, i\, x_2 y_1^2 y_2 - 1284\, i\, d\gamma\, x_2 y_1^2 y_2 - 216\, i\, d\gamma^2 x_2 y_1^2 y_2 - 12\, i\, d\gamma^3 x_2 y_1^2 y_2 -$$

$$84\, i\, h_1^2 x_2 y_1^2 y_2 - 12\, i\, d\gamma\, h_1^2 x_2 y_1^2 y_2 + 84\, i\, h_1 h_2 x_2 y_1^2 y_2 + 12\, i\, d\gamma\, h_1 h_2 x_2 y_1^2 y_2 - 84\, i\, h_2^2 x_2 y_1^2 y_2 -$$

$$12\, i\, d\gamma\, h_2^2 x_2 y_1^2 y_2 - 84\, i\, x_2^3 y_1^2 y_2 - 12\, i\, d\gamma\, x_2^3 y_1^2 y_2 - 84\, h_1 x_1 x_3 y_1^2 y_2 - 12\, d\gamma\, h_1 x_1 x_3 y_1^2 y_2 +$$

$$210\, h_2 x_1 x_3 y_1^2 y_2 + 30\, d\gamma\, h_2 x_1 x_3 y_1^2 y_2 + 168\, i\, x_2 x_3^2 y_1^2 y_2 + 24\, i\, d\gamma\, x_2 x_3^2 y_1^2 y_2 - 168\, x_1 x_2 y_1^3 y_2 -$$

$$24\, d\gamma\, x_1 x_2 y_1^3 y_2 - 84\, i\, h_1 x_3 y_1^3 y_2 - 12\, i\, d\gamma\, h_1 x_3 y_1^3 y_2 + 210\, i\, h_2 x_3 y_1^3 y_2 + 30\, i\, d\gamma\, h_2 x_3 y_1^3 y_2 -$$

$$84\, i\, x_2 y_1^4 y_2 - 12\, i\, d\gamma\, x_2 y_1^4 y_2 - 1260\, x_1^2 y_2^2 - 642\, d\gamma\, x_1^2 y_2^2 - 108\, d\gamma^2 x_1^2 y_2^2 - 6\, d\gamma^3 x_1^2 y_2^2 -$$

$$42\, h_1^2\, x_1^2\, y_2^2 - 6\, d\gamma\, h_1^2\, x_1^2\, y_2^2 + 42\, h_1\, h_2\, x_1^2\, y_2^2 + 6\, d\gamma\, h_1\, h_2\, x_1^2\, y_2^2 - 42\, h_2^2\, x_1^2\, y_2^2 - 6\, d\gamma\, h_2^2\, x_1^2\, y_2^2 -$$
$$42\, x_1^4\, y_2^2 - 6\, d\gamma\, x_1^4\, y_2^2 + 210\, i\, h_1\, x_1\, x_2\, x_3\, y_2^2 + 30\, i\, d\gamma\, h_1\, x_1\, x_2\, x_3\, y_2^2 - 84\, i\, h_2\, x_1\, x_2\, x_3\, y_2^2 -$$
$$12\, i\, d\gamma\, h_2\, x_1\, x_2\, x_3\, y_2^2 - 840\, x_3^2\, y_2^2 - 428\, d\gamma\, x_3^2\, y_2^2 - 72\, d\gamma^2\, x_3^2\, y_2^2 - 4\, d\gamma^3\, x_3^2\, y_2^2 - 196\, h_1^2\, x_3^2\, y_2^2 -$$
$$28\, d\gamma\, h_1^2\, x_3^2\, y_2^2 + 238\, h_1\, h_2\, x_3^2\, y_2^2 + 34\, d\gamma\, h_1\, h_2\, x_3^2\, y_2^2 - 70\, h_2^2\, x_3^2\, y_2^2 - 10\, d\gamma\, h_2^2\, x_3^2\, y_2^2 + 182\, x_1^2\, x_3^2\, y_2^2 +$$
$$26\, d\gamma\, x_1^2\, x_3^2\, y_2^2 - 28\, x_2^2\, x_3^2\, y_2^2 - 4\, d\gamma\, x_2^2\, x_3^2\, y_2^2 - 28\, x_3^4\, y_2^2 - 4\, d\gamma\, x_3^4\, y_2^2 - 2520\, i\, x_1\, y_1\, y_2^2 -$$
$$1284\, i\, d\gamma\, x_1\, y_1\, y_2^2 - 216\, i\, d\gamma^2\, x_1\, y_1\, y_2^2 - 12\, i\, d\gamma^3\, x_1\, y_1\, y_2^2 - 84\, i\, h_1^2\, x_1\, y_1\, y_2^2 - 12\, i\, d\gamma\, h_1^2\, x_1\, y_1\, y_2^2 +$$
$$84\, i\, h_1\, h_2\, x_1\, y_1\, y_2^2 + 12\, i\, d\gamma\, h_1\, h_2\, x_1\, y_1\, y_2^2 - 84\, i\, h_2^2\, x_1\, y_1\, y_2^2 - 12\, i\, d\gamma\, h_2^2\, x_1\, y_1\, y_2^2 - 84\, i\, x_1^3\, y_1\, y_2^2 -$$
$$12\, i\, d\gamma\, x_1^3\, y_1\, y_2^2 - 210\, h_1\, x_2\, x_3\, y_1\, y_2^2 - 30\, d\gamma\, h_1\, x_2\, x_3\, y_1\, y_2^2 + 84\, h_2\, x_2\, x_3\, y_1\, y_2^2 + 12\, d\gamma\, h_2\, x_2\, x_3\, y_1\, y_2^2 +$$
$$168\, i\, x_1\, x_3^2\, y_1\, y_2^2 + 24\, i\, d\gamma\, x_1\, x_3^2\, y_1\, y_2^2 + 1260\, y_1^2\, y_2^2 + 642\, d\gamma\, y_1^2\, y_2^2 + 108\, d\gamma^2\, y_1^2\, y_2^2 + 6\, d\gamma^3\, y_1^2\, y_2^2 +$$
$$42\, h_1^2\, y_1^2\, y_2^2 + 6\, d\gamma\, h_1^2\, y_1^2\, y_2^2 - 42\, h_1\, h_2\, y_1^2\, y_2^2 - 6\, d\gamma\, h_1\, h_2\, y_1^2\, y_2^2 + 42\, h_2^2\, y_1^2\, y_2^2 + 6\, d\gamma\, h_2^2\, y_1^2\, y_2^2 +$$
$$14\, x_3^2\, y_1^2\, y_2^2 + 2\, d\gamma\, x_3^2\, y_1^2\, y_2^2 - 84\, i\, x_1\, y_1^3\, y_2^2 - 12\, i\, d\gamma\, x_1\, y_1^3\, y_2^2 + 42\, y_1^4\, y_2^2 + 6\, d\gamma\, y_1^4\, y_2^2 + 84\, i\, x_1^2\, x_2\, y_2^3 +$$
$$12\, i\, d\gamma\, x_1^2\, x_2\, y_2^3 - 210\, h_1\, x_1\, x_3\, y_2^3 - 30\, d\gamma\, h_1\, x_1\, x_3\, y_2^3 + 84\, h_2\, x_1\, x_3\, y_2^3 + 12\, d\gamma\, h_2\, x_1\, x_3\, y_2^3 -$$
$$168\, x_1\, x_2\, y_1\, y_2^3 - 24\, d\gamma\, x_1\, x_2\, y_1\, y_2^3 - 210\, i\, h_1\, x_3\, y_1\, y_2^3 - 30\, i\, d\gamma\, h_1\, x_3\, y_1\, y_2^3 + 84\, i\, h_2\, x_3\, y_1\, y_2^3 +$$
$$12\, i\, d\gamma\, h_2\, x_3\, y_1\, y_2^3 - 84\, i\, x_2\, y_1^2\, y_2^3 - 12\, i\, d\gamma\, x_2\, y_1^2\, y_2^3 - 42\, x_1^2\, y_2^4 - 6\, d\gamma\, x_1^2\, y_2^4 - 14\, x_3^2\, y_2^4 - 2\, d\gamma\, x_3^2\, y_2^4 -$$
$$84\, i\, x_1\, y_1\, y_2^4 - 12\, i\, d\gamma\, x_1\, y_1\, y_2^4 + 42\, y_1^2\, y_2^4 + 6\, d\gamma\, y_1^2\, y_2^4 - 2520\, h_1\, x_1\, x_2\, y_3 - 1284\, d\gamma\, h_1\, x_1\, x_2\, y_3 -$$
$$216\, d\gamma^2\, h_1\, x_1\, x_2\, y_3 - 12\, d\gamma^3\, h_1\, x_1\, x_2\, y_3 - 84\, h_1^3\, x_1\, x_2\, y_3 - 12\, d\gamma\, h_1^3\, x_1\, x_2\, y_3 + 2520\, h_2\, x_1\, x_2\, y_3 +$$
$$1284\, d\gamma\, h_2\, x_1\, x_2\, y_3 + 216\, d\gamma^2\, h_2\, x_1\, x_2\, y_3 + 12\, d\gamma^3\, h_2\, x_1\, x_2\, y_3 + 294\, h_1^2\, h_2\, x_1\, x_2\, y_3 + 42\, d\gamma\, h_1^2\, h_2\, x_1\, x_2\, y_3 -$$
$$294\, h_1\, h_2^2\, x_1\, x_2\, y_3 - 42\, d\gamma\, h_1\, h_2^2\, x_1\, x_2\, y_3 + 84\, h_2^3\, x_1\, x_2\, y_3 + 12\, d\gamma\, h_2^3\, x_1\, x_2\, y_3 - 84\, h_1\, x_1^3\, x_2\, y_3 -$$
$$12\, d\gamma\, h_1\, x_1^3\, x_2\, y_3 + 210\, h_2\, x_1^3\, x_2\, y_3 + 30\, d\gamma\, h_2\, x_1^3\, x_2\, y_3 - 210\, h_1\, x_1\, x_2^3\, y_3 - 30\, d\gamma\, h_1\, x_1\, x_2^3\, y_3 +$$
$$84\, h_2\, x_1\, x_2^3\, y_3 + 12\, d\gamma\, h_2\, x_1\, x_2^3\, y_3 - 10\,080\, i\, x_3\, y_3 - 11\,016\, i\, d\gamma\, x_3\, y_3 - 4700\, i\, d\gamma^2\, x_3\, y_3 -$$
$$980\, i\, d\gamma^3\, x_3\, y_3 - 100\, i\, d\gamma^4\, x_3\, y_3 - 4\, i\, d\gamma^5\, x_3\, y_3 - 4200\, i\, h_1^2\, x_3\, y_3 - 2140\, i\, d\gamma\, h_1^2\, x_3\, y_3 -$$
$$360\, i\, d\gamma^2\, h_1^2\, x_3\, y_3 - 20\, i\, d\gamma^3\, h_1^2\, x_3\, y_3 - 112\, i\, h_1^4\, x_3\, y_3 - 16\, i\, d\gamma\, h_1^4\, x_3\, y_3 + 6720\, i\, h_1\, h_2\, x_3\, y_3 +$$
$$3424\, i\, d\gamma\, h_1\, h_2\, x_3\, y_3 + 576\, i\, d\gamma^2\, h_1\, h_2\, x_3\, y_3 + 32\, i\, d\gamma^3\, h_1\, h_2\, x_3\, y_3 + 560\, i\, h_1^3\, h_2\, x_3\, y_3 +$$
$$80\, i\, d\gamma\, h_1^3\, h_2\, x_3\, y_3 - 4200\, i\, h_2^2\, x_3\, y_3 - 2140\, i\, d\gamma\, h_2^2\, x_3\, y_3 - 360\, i\, d\gamma^2\, h_2^2\, x_3\, y_3 - 20\, i\, d\gamma^3\, h_2^2\, x_3\, y_3 -$$
$$924\, i\, h_1^2\, h_2^2\, x_3\, y_3 - 132\, i\, d\gamma\, h_1^2\, h_2^2\, x_3\, y_3 + 560\, i\, h_1\, h_2^3\, x_3\, y_3 + 80\, i\, d\gamma\, h_1\, h_2^3\, x_3\, y_3 - 112\, i\, h_2^4\, x_3\, y_3 -$$
$$16\, i\, d\gamma\, h_2^4\, x_3\, y_3 - 1680\, i\, x_1^2\, x_3\, y_3 - 856\, i\, d\gamma\, x_1^2\, x_3\, y_3 - 144\, i\, d\gamma^2\, x_1^2\, x_3\, y_3 - 8\, i\, d\gamma^3\, x_1^2\, x_3\, y_3 -$$
$$140\, i\, h_1^2\, x_1^2\, x_3\, y_3 - 20\, i\, d\gamma\, h_1^2\, x_1^2\, x_3\, y_3 + 476\, i\, h_1\, h_2\, x_1^2\, x_3\, y_3 + 68\, i\, d\gamma\, h_1\, h_2\, x_1^2\, x_3\, y_3 -$$
$$392\, i\, h_2^2\, x_1^2\, x_3\, y_3 - 56\, i\, d\gamma\, h_2^2\, x_1^2\, x_3\, y_3 - 28\, i\, x_1^4\, x_3\, y_3 - 4\, i\, d\gamma\, x_1^4\, x_3\, y_3 - 1680\, i\, x_2^2\, x_3\, y_3 -$$
$$856\, i\, d\gamma\, x_2^2\, x_3\, y_3 - 144\, i\, d\gamma^2\, x_2^2\, x_3\, y_3 - 8\, i\, d\gamma^3\, x_2^2\, x_3\, y_3 - 392\, i\, h_1^2\, x_2^2\, x_3\, y_3 - 56\, i\, d\gamma\, h_1^2\, x_2^2\, x_3\, y_3 +$$
$$476\, i\, h_1\, h_2\, x_2^2\, x_3\, y_3 + 68\, i\, d\gamma\, h_1\, h_2\, x_2^2\, x_3\, y_3 - 140\, i\, h_2^2\, x_2^2\, x_3\, y_3 - 20\, i\, d\gamma\, h_2^2\, x_2^2\, x_3\, y_3 + 196\, i\, x_1^2\, x_2^2\, x_3\, y_3 +$$
$$28\, i\, d\gamma\, x_1^2\, x_2^2\, x_3\, y_3 - 28\, i\, x_2^4\, x_3\, y_3 - 4\, i\, d\gamma\, x_2^4\, x_3\, y_3 - 210\, h_1\, x_1\, x_2\, x_3^2\, y_3 - 30\, d\gamma\, h_1\, x_1\, x_2\, x_3^2\, y_3 +$$
$$210\, h_2\, x_1\, x_2\, x_3^2\, y_3 + 30\, d\gamma\, h_2\, x_1\, x_2\, x_3^2\, y_3 - 1680\, i\, x_3^3\, y_3 - 856\, i\, d\gamma\, x_3^3\, y_3 - 144\, i\, d\gamma^2\, x_3^3\, y_3 -$$
$$8\, i\, d\gamma^3\, x_3^3\, y_3 + 112\, i\, h_1^2\, x_3^3\, y_3 + 16\, i\, d\gamma\, h_1^2\, x_3^3\, y_3 - 280\, i\, h_1\, h_2\, x_3^3\, y_3 - 40\, i\, d\gamma\, h_1\, h_2\, x_3^3\, y_3 +$$
$$112\, i\, h_2^2\, x_3^3\, y_3 + 16\, i\, d\gamma\, h_2^2\, x_3^3\, y_3 - 56\, i\, x_1^2\, x_3^3\, y_3 - 8\, i\, d\gamma\, x_1^2\, x_3^3\, y_3 - 56\, i\, x_2^2\, x_3^3\, y_3 - 8\, i\, d\gamma\, x_2^2\, x_3^3\, y_3 -$$
$$28\, i\, x_3^5\, y_3 - 4\, i\, d\gamma\, x_3^5\, y_3 - 2520\, i\, h_1\, x_2\, y_1\, y_3 - 1284\, i\, d\gamma\, h_1\, x_2\, y_1\, y_3 - 216\, i\, d\gamma^2\, h_1\, x_2\, y_1\, y_3 -$$
$$12\, i\, d\gamma^3\, h_1\, x_2\, y_1\, y_3 - 84\, i\, h_1^3\, x_2\, y_1\, y_3 - 12\, i\, d\gamma\, h_1^3\, x_2\, y_1\, y_3 + 2520\, i\, h_2\, x_2\, y_1\, y_3 +$$
$$1284\, i\, d\gamma\, h_2\, x_2\, y_1\, y_3 + 216\, i\, d\gamma^2\, h_2\, x_2\, y_1\, y_3 + 12\, i\, d\gamma^3\, h_2\, x_2\, y_1\, y_3 + 294\, i\, h_1^2\, h_2\, x_2\, y_1\, y_3 +$$
$$42\, i\, d\gamma\, h_1^2\, h_2\, x_2\, y_1\, y_3 - 294\, i\, h_1\, h_2^2\, x_2\, y_1\, y_3 - 42\, i\, d\gamma\, h_1\, h_2^2\, x_2\, y_1\, y_3 + 84\, i\, h_2^3\, x_2\, y_1\, y_3 +$$
$$12\, i\, d\gamma\, h_2^3\, x_2\, y_1\, y_3 - 84\, i\, h_1\, x_1^2\, x_2\, y_1\, y_3 - 12\, i\, d\gamma\, h_1\, x_1^2\, x_2\, y_1\, y_3 + 210\, i\, h_2\, x_1^2\, x_2\, y_1\, y_3 +$$
$$30\, i\, d\gamma\, h_2\, x_1^2\, x_2\, y_1\, y_3 - 210\, i\, h_1\, x_2^3\, y_1\, y_3 - 30\, i\, d\gamma\, h_1\, x_2^3\, y_1\, y_3 + 84\, i\, h_2\, x_2^3\, y_1\, y_3 + 12\, i\, d\gamma\, h_2\, x_2^3\, y_1\, y_3 +$$
$$546\, i\, h_1\, x_2\, x_3^2\, y_1\, y_3 + 78\, i\, d\gamma\, h_1\, x_2\, x_3^2\, y_1\, y_3 - 546\, i\, h_2\, x_2\, x_3^2\, y_1\, y_3 - 78\, i\, d\gamma\, h_2\, x_2\, x_3^2\, y_1\, y_3 -$$
$$84\, h_1\, x_1\, x_2\, y_1^2\, y_3 - 12\, d\gamma\, h_1\, x_1\, x_2\, y_1^2\, y_3 + 210\, h_2\, x_1\, x_2\, y_1^2\, y_3 + 30\, d\gamma\, h_2\, x_1\, x_2\, y_1^2\, y_3 - 1680\, i\, x_3\, y_1^2\, y_3 -$$
$$856\, i\, d\gamma\, x_3\, y_1^2\, y_3 - 144\, i\, d\gamma^2\, x_3\, y_1^2\, y_3 - 8\, i\, d\gamma^3\, x_3\, y_1^2\, y_3 - 140\, i\, h_1^2\, x_3\, y_1^2\, y_3 - 20\, i\, d\gamma\, h_1^2\, x_3\, y_1^2\, y_3 +$$
$$476\, i\, h_1\, h_2\, x_3\, y_1^2\, y_3 + 68\, i\, d\gamma\, h_1\, h_2\, x_3\, y_1^2\, y_3 - 392\, i\, h_2^2\, x_3\, y_1^2\, y_3 - 56\, i\, d\gamma\, h_2^2\, x_3\, y_1^2\, y_3 -$$
$$56\, i\, x_1^2\, x_3\, y_1^2\, y_3 - 8\, i\, d\gamma\, x_1^2\, x_3\, y_1^2\, y_3 + 196\, i\, x_2^2\, x_3\, y_1^2\, y_3 + 28\, i\, d\gamma\, x_2^2\, x_3\, y_1^2\, y_3 - 56\, i\, x_3^3\, y_1^2\, y_3 -$$
$$8\, i\, d\gamma\, x_3^3\, y_1^2\, y_3 - 84\, i\, h_1\, x_2\, y_1^3\, y_3 - 12\, i\, d\gamma\, h_1\, x_2\, y_1^3\, y_3 + 210\, i\, h_2\, x_2\, y_1^3\, y_3 + 30\, i\, d\gamma\, h_2\, x_2\, y_1^3\, y_3 -$$
$$28\, i\, x_3\, y_1^4\, y_3 - 4\, i\, d\gamma\, x_3\, y_1^4\, y_3 - 2520\, i\, h_1\, x_1\, y_2\, y_3 - 1284\, i\, d\gamma\, h_1\, x_1\, y_2\, y_3 - 216\, i\, d\gamma^2\, h_1\, x_1\, y_2\, y_3 -$$

$12\,i\,d\gamma^3\,h_1\,x_1\,y_2\,y_3 - 84\,i\,h_1^3\,x_1\,y_2\,y_3 - 12\,i\,d\gamma\,h_1^3\,x_1\,y_2\,y_3 + 2520\,i\,h_2\,x_1\,y_2\,y_3 +$

$1284\,i\,d\gamma\,h_2\,x_1\,y_2\,y_3 + 216\,i\,d\gamma^2\,h_2\,x_1\,y_2\,y_3 + 12\,i\,d\gamma^3\,h_2\,x_1\,y_2\,y_3 + 294\,i\,h_1^2\,h_2\,x_1\,y_2\,y_3 +$

$42\,i\,d\gamma\,h_1^2\,h_2\,x_1\,y_2\,y_3 - 294\,i\,h_1\,h_2^2\,x_1\,y_2\,y_3 - 42\,i\,d\gamma\,h_1\,h_2^2\,x_1\,y_2\,y_3 + 84\,i\,h_2^3\,x_1\,y_2\,y_3 +$

$12\,i\,d\gamma\,h_2^3\,x_1\,y_2\,y_3 - 84\,i\,h_1\,x_1^3\,y_2\,y_3 - 12\,i\,d\gamma\,h_1\,x_1^3\,y_2\,y_3 + 210\,i\,h_2\,x_1^3\,y_2\,y_3 + 30\,i\,d\gamma\,h_2\,x_1^3\,y_2\,y_3 -$

$210\,i\,h_1\,x_1\,x_2^2\,y_2\,y_3 - 30\,i\,d\gamma\,h_1\,x_1\,x_2^2\,y_2\,y_3 + 84\,i\,h_2\,x_1\,x_2^2\,y_2\,y_3 + 12\,i\,d\gamma\,h_2\,x_1\,x_2^2\,y_2\,y_3 +$

$546\,i\,h_1\,x_1\,x_3^2\,y_2\,y_3 + 78\,i\,d\gamma\,h_1\,x_1\,x_3^2\,y_2\,y_3 - 546\,i\,h_2\,x_1\,x_3^2\,y_2\,y_3 - 78\,i\,d\gamma\,h_2\,x_1\,x_3^2\,y_2\,y_3 +$

$2520\,h_1\,y_1\,y_2\,y_3 + 1284\,d\gamma\,h_1\,y_1\,y_2\,y_3 + 216\,d\gamma^2\,h_1\,y_1\,y_2\,y_3 + 12\,d\gamma^3\,h_1\,y_1\,y_2\,y_3 + 84\,h_1^3\,y_1\,y_2\,y_3 +$

$12\,d\gamma\,h_1^3\,y_1\,y_2\,y_3 - 2520\,h_2\,y_1\,y_2\,y_3 - 1284\,d\gamma\,h_2\,y_1\,y_2\,y_3 - 216\,d\gamma^2\,h_2\,y_1\,y_2\,y_3 - 12\,d\gamma^3\,h_2\,y_1\,y_2\,y_3 -$

$294\,h_1^2\,h_2\,y_1\,y_2\,y_3 - 42\,d\gamma\,h_1^2\,h_2\,y_1\,y_2\,y_3 + 294\,h_1\,h_2^2\,y_1\,y_2\,y_3 + 42\,d\gamma\,h_1\,h_2^2\,y_1\,y_2\,y_3 - 84\,h_2^3\,y_1\,y_2\,y_3 -$

$12\,d\gamma\,h_2^3\,y_1\,y_2\,y_3 + 84\,h_1\,x_1^2\,y_1\,y_2\,y_3 + 12\,d\gamma\,h_1\,x_1^2\,y_1\,y_2\,y_3 - 210\,h_2\,x_1^2\,y_1\,y_2\,y_3 - 30\,d\gamma\,h_2\,x_1^2\,y_1\,y_2\,y_3 +$

$210\,h_1\,x_2^2\,y_1\,y_2\,y_3 + 30\,d\gamma\,h_1\,x_2^2\,y_1\,y_2\,y_3 - 84\,h_2\,x_2^2\,y_1\,y_2\,y_3 - 12\,d\gamma\,h_2\,x_2^2\,y_1\,y_2\,y_3 + 210\,h_1\,x_3^2\,y_1\,y_2\,y_3 +$

$30\,d\gamma\,h_1\,x_3^2\,y_1\,y_2\,y_3 - 210\,h_2\,x_3^2\,y_1\,y_2\,y_3 - 30\,d\gamma\,h_2\,x_3^2\,y_1\,y_2\,y_3 - 84\,i\,h_1\,x_1\,y_1^2\,y_2\,y_3 -$

$12\,i\,d\gamma\,h_1\,x_1\,y_1^2\,y_2\,y_3 + 210\,i\,h_2\,x_1\,y_1^2\,y_2\,y_3 + 30\,i\,d\gamma\,h_2\,x_1\,y_1^2\,y_2\,y_3 + 84\,h_1\,y_1^3\,y_2\,y_3 +$

$12\,d\gamma\,h_1\,y_1^3\,y_2\,y_3 - 210\,h_2\,y_1^3\,y_2\,y_3 - 30\,d\gamma\,h_2\,y_1^3\,y_2\,y_3 - 210\,h_1\,x_1\,x_2\,y_2^2\,y_3 - 30\,d\gamma\,h_1\,x_1\,x_2\,y_2^2\,y_3 +$

$84\,h_2\,x_1\,x_2\,y_2^2\,y_3 + 12\,d\gamma\,h_2\,x_1\,x_2\,y_2^2\,y_3 - 1680\,i\,x_3\,y_2^2\,y_3 - 856\,i\,d\gamma\,x_3\,y_2^2\,y_3 - 144\,i\,d\gamma^2\,x_3\,y_2^2\,y_3 -$

$8\,i\,d\gamma^3\,x_3\,y_2^2\,y_3 - 392\,i\,h_1^2\,x_3\,y_2^2\,y_3 - 56\,i\,d\gamma\,h_1^2\,x_3\,y_2^2\,y_3 + 476\,i\,h_1\,h_2\,x_3\,y_2^2\,y_3 + 68\,i\,d\gamma\,h_1\,h_2\,x_3\,y_2^2\,y_3 -$

$140\,i\,h_2^2\,x_3\,y_2^2\,y_3 - 20\,i\,d\gamma\,h_2^2\,x_3\,y_2^2\,y_3 + 196\,i\,x_1^2\,x_3\,y_2^2\,y_3 + 28\,i\,d\gamma\,x_1^2\,x_3\,y_2^2\,y_3 - 56\,i\,x_2^2\,x_3\,y_2^2\,y_3 -$

$8\,i\,d\gamma\,x_2^2\,x_3\,y_2^2\,y_3 - 56\,i\,x_3^3\,y_2^2\,y_3 - 8\,i\,d\gamma\,x_3^3\,y_2^2\,y_3 - 210\,i\,h_1\,x_2\,y_1\,y_2^2\,y_3 - 30\,i\,d\gamma\,h_1\,x_2\,y_1\,y_2^2\,y_3 +$

$84\,i\,h_2\,x_2\,y_1\,y_2^2\,y_3 + 12\,i\,d\gamma\,h_2\,x_2\,y_1\,y_2^2\,y_3 + 196\,i\,x_3\,y_1^2\,y_2^2\,y_3 + 28\,i\,d\gamma\,x_3\,y_1^2\,y_2^2\,y_3 -$

$210\,i\,h_1\,x_1\,y_2^3\,y_3 - 30\,i\,d\gamma\,h_1\,x_1\,y_2^3\,y_3 + 84\,i\,h_2\,x_1\,y_2^3\,y_3 + 12\,i\,d\gamma\,h_2\,x_1\,y_2^3\,y_3 + 210\,h_1\,y_1\,y_2^3\,y_3 +$

$30\,d\gamma\,h_1\,y_1\,y_2^3\,y_3 - 84\,h_2\,y_1\,y_2^3\,y_3 - 12\,d\gamma\,h_2\,y_1\,y_2^3\,y_3 - 28\,i\,x_3\,y_2^4\,y_3 - 4\,i\,d\gamma\,x_3\,y_2^4\,y_3 + 5040\,y_3^2 +$

$5508\,d\gamma\,y_3^2 + 2350\,d\gamma^2\,y_3^2 + 490\,d\gamma^3\,y_3^2 + 50\,d\gamma^4\,y_3^2 + 2\,d\gamma^5\,y_3^2 + 2100\,h_1^2\,y_3^2 + 1070\,d\gamma\,h_1^2\,y_3^2 +$

$180\,d\gamma^2\,h_1^2\,y_3^2 + 10\,d\gamma^3\,h_1^2\,y_3^2 + 56\,h_1^4\,y_3^2 + 8\,d\gamma\,h_1^4\,y_3^2 - 3360\,h_1\,h_2\,y_3^2 - 1712\,d\gamma\,h_1\,h_2\,y_3^2 -$

$288\,d\gamma^2\,h_1\,h_2\,y_3^2 - 16\,d\gamma^3\,h_1\,h_2\,y_3^2 - 280\,h_1^3\,h_2\,y_3^2 - 40\,d\gamma\,h_1^3\,h_2\,y_3^2 + 2100\,h_2^2\,y_3^2 + 1070\,d\gamma\,h_2^2\,y_3^2 +$

$180\,d\gamma^2\,h_2^2\,y_3^2 + 10\,d\gamma^3\,h_2^2\,y_3^2 + 462\,h_1^2\,h_2^2\,y_3^2 + 66\,d\gamma\,h_1^2\,h_2^2\,y_3^2 - 280\,h_1\,h_2^3\,y_3^2 - 40\,d\gamma\,h_1\,h_2^3\,y_3^2 +$

$56\,h_2^4\,y_3^2 + 8\,d\gamma\,h_2^4\,y_3^2 + 840\,x_1^2\,y_3^2 + 428\,d\gamma\,x_1^2\,y_3^2 + 72\,d\gamma^2\,x_1^2\,y_3^2 + 4\,d\gamma^3\,x_1^2\,y_3^2 + 70\,h_1^2\,x_1^2\,y_3^2 +$

$10\,d\gamma\,h_1^2\,x_1^2\,y_3^2 - 238\,h_1\,h_2\,x_1^2\,y_3^2 - 34\,d\gamma\,h_1\,h_2\,x_1^2\,y_3^2 + 196\,h_2^2\,x_1^2\,y_3^2 + 28\,d\gamma\,h_2^2\,x_1^2\,y_3^2 + 14\,x_1^4\,y_3^2 +$

$2\,d\gamma\,x_1^4\,y_3^2 + 840\,x_2^2\,y_3^2 + 428\,d\gamma\,x_2^2\,y_3^2 + 72\,d\gamma^2\,x_2^2\,y_3^2 + 4\,d\gamma^3\,x_2^2\,y_3^2 + 196\,h_1^2\,x_2^2\,y_3^2 + 28\,d\gamma\,h_1^2\,x_2^2\,y_3^2 -$

$238\,h_1\,h_2\,x_2^2\,y_3^2 - 34\,d\gamma\,h_1\,h_2\,x_2^2\,y_3^2 + 70\,h_2^2\,x_2^2\,y_3^2 + 10\,d\gamma\,h_2^2\,x_2^2\,y_3^2 - 182\,x_1^2\,x_2^2\,y_3^2 - 26\,d\gamma\,x_1^2\,x_2^2\,y_3^2 +$

$14\,x_2^4\,y_3^2 + 2\,d\gamma\,x_2^4\,y_3^2 - 546\,i\,h_1\,x_1\,x_2\,x_3\,y_3^2 - 78\,i\,d\gamma\,h_1\,x_1\,x_2\,x_3\,y_3^2 + 546\,i\,h_2\,x_1\,x_2\,x_3\,y_3^2 +$

$78\,i\,d\gamma\,h_2\,x_1\,x_2\,x_3\,y_3^2 - 14\,x_3^4\,y_3^2 - 2\,d\gamma\,x_3^4\,y_3^2 - 168\,i\,x_1\,x_2^2\,y_1\,y_3^2 - 24\,i\,d\gamma\,x_1\,x_2^2\,y_1\,y_3^2 -$

$210\,h_1\,x_2\,x_3\,y_1\,y_3^2 - 30\,d\gamma\,h_1\,x_2\,x_3\,y_1\,y_3^2 + 210\,h_2\,x_2\,x_3\,y_1\,y_3^2 + 30\,d\gamma\,h_2\,x_2\,x_3\,y_1\,y_3^2 + 840\,y_1^2\,y_3^2 +$

$428\,d\gamma\,y_1^2\,y_3^2 + 72\,d\gamma^2\,y_1^2\,y_3^2 + 4\,d\gamma^3\,y_1^2\,y_3^2 + 70\,h_1^2\,y_1^2\,y_3^2 + 10\,d\gamma\,h_1^2\,y_1^2\,y_3^2 - 238\,h_1\,h_2\,y_1^2\,y_3^2 -$

$34\,d\gamma\,h_1\,h_2\,y_1^2\,y_3^2 + 196\,h_2^2\,y_1^2\,y_3^2 + 28\,d\gamma\,h_2^2\,y_1^2\,y_3^2 + 28\,x_1^2\,y_1^2\,y_3^2 + 4\,d\gamma\,x_1^2\,y_1^2\,y_3^2 - 14\,x_2^2\,y_1^2\,y_3^2 -$

$2\,d\gamma\,x_2^2\,y_1^2\,y_3^2 + 14\,y_1^4\,y_3^2 + 2\,d\gamma\,y_1^4\,y_3^2 - 168\,i\,x_1^2\,x_2\,y_2\,y_3^2 - 24\,i\,d\gamma\,x_1^2\,x_2\,y_2\,y_3^2 - 210\,h_1\,x_1\,x_3\,y_2\,y_3^2 -$

$30\,d\gamma\,h_1\,x_1\,x_3\,y_2\,y_3^2 + 210\,h_2\,x_1\,x_3\,y_2\,y_3^2 + 30\,d\gamma\,h_2\,x_1\,x_3\,y_2\,y_3^2 + 336\,x_1\,x_2\,y_1\,y_2\,y_3^2 +$

$48\,d\gamma\,x_1\,x_2\,y_1\,y_2\,y_3^2 + 546\,i\,h_1\,x_3\,y_1\,y_2\,y_3^2 + 78\,i\,d\gamma\,h_1\,x_3\,y_1\,y_2\,y_3^2 - 546\,i\,h_2\,x_3\,y_1\,y_2\,y_3^2 -$

$78\,i\,d\gamma\,h_2\,x_3\,y_1\,y_2\,y_3^2 + 168\,i\,x_2\,y_1^2\,y_2\,y_3^2 + 24\,i\,d\gamma\,x_2\,y_1^2\,y_2\,y_3^2 + 840\,y_2^2\,y_3^2 + 428\,d\gamma\,y_2^2\,y_3^2 +$

$72\,d\gamma^2\,y_2^2\,y_3^2 + 4\,d\gamma^3\,y_2^2\,y_3^2 + 196\,h_1^2\,y_2^2\,y_3^2 + 28\,d\gamma\,h_1^2\,y_2^2\,y_3^2 - 238\,h_1\,h_2\,y_2^2\,y_3^2 - 34\,d\gamma\,h_1\,h_2\,y_2^2\,y_3^2 +$

$70\,h_2^2\,y_2^2\,y_3^2 + 10\,d\gamma\,h_2^2\,y_2^2\,y_3^2 - 14\,x_1^2\,y_2^2\,y_3^2 - 2\,d\gamma\,x_1^2\,y_2^2\,y_3^2 + 28\,x_2^2\,y_2^2\,y_3^2 + 4\,d\gamma\,x_2^2\,y_2^2\,y_3^2 +$

$168\,i\,x_1\,y_1\,y_2^2\,y_3^2 + 24\,i\,d\gamma\,x_1\,y_1\,y_2^2\,y_3^2 - 182\,y_1^2\,y_2^2\,y_3^2 - 26\,d\gamma\,y_1^2\,y_2^2\,y_3^2 + 14\,y_2^4\,y_3^2 + 2\,d\gamma\,y_2^4\,y_3^2 +$

$294\,h_1\,x_1\,x_2\,y_3^3 + 42\,d\gamma\,h_1\,x_1\,x_2\,y_3^3 - 294\,h_2\,x_1\,x_2\,y_3^3 - 42\,d\gamma\,h_2\,x_1\,x_2\,y_3^3 - 1680\,i\,x_3\,y_3^3 -$

$856\,i\,d\gamma\,x_3\,y_3^3 - 144\,i\,d\gamma^2\,x_3\,y_3^3 - 8\,i\,d\gamma^3\,x_3\,y_3^3 + 112\,i\,h_1^2\,x_3\,y_3^3 + 16\,i\,d\gamma\,h_1^2\,x_3\,y_3^3 -$

$280\,i\,h_1\,h_2\,x_3\,y_3^3 - 40\,i\,d\gamma\,h_1\,h_2\,x_3\,y_3^3 + 112\,i\,h_2^2\,x_3\,y_3^3 + 16\,i\,d\gamma\,h_2^2\,x_3\,y_3^3 - 56\,i\,x_1^2\,x_3\,y_3^3 -$

$8\,i\,d\gamma\,x_1^2\,x_3\,y_3^3 - 56\,i\,x_2^2\,x_3\,y_3^3 - 8\,i\,d\gamma\,x_2^2\,x_3\,y_3^3 - 56\,i\,x_3^3\,y_3^3 - 8\,i\,d\gamma\,x_3^3\,y_3^3 + 42\,i\,h_1\,x_2\,y_1\,y_3^3 +$

$6\,i\,d\gamma\,h_1\,x_2\,y_1\,y_3^3 - 42\,i\,h_2\,x_2\,y_1\,y_3^3 - 6\,i\,d\gamma\,h_2\,x_2\,y_1\,y_3^3 - 56\,i\,x_3\,y_1^2\,y_3^3 - 8\,i\,d\gamma\,x_3\,y_1^2\,y_3^3 +$

$42\,i\,h_1\,x_1\,y_2\,y_3^3 + 6\,i\,d\gamma\,h_1\,x_1\,y_2\,y_3^3 - 42\,i\,h_2\,x_1\,y_2\,y_3^3 - 6\,i\,d\gamma\,h_2\,x_1\,y_2\,y_3^3 - 294\,h_1\,y_1\,y_2\,y_3^3 -$

$$42 \, d\gamma \, h_1 \, y_1 \, y_2 \, y_3^3 + 294 \, h_2 \, y_1 \, y_2 \, y_3^3 + 42 \, d\gamma \, h_2 \, y_1 \, y_2 \, y_3^3 - 56 \, i \, x_3 \, y_2^2 \, y_3^3 - 8 \, i \, d\gamma \, x_3 \, y_2^2 \, y_3^3 + 840 \, y_3^4 +$$
$$428 \, d\gamma \, y_3^4 + 72 \, d\gamma^2 \, y_3^4 + 4 \, d\gamma^3 \, y_3^4 - 56 \, h_1^2 \, y_3^4 - 8 \, d\gamma \, h_1^2 \, y_3^4 + 140 \, h_1 \, h_2 \, y_3^4 + 20 \, d\gamma \, h_1 \, h_2 \, y_3^4 - 56 \, h_2^2 \, y_3^4 -$$
$$8 \, d\gamma \, h_2^2 \, y_3^4 + 28 \, x_1^2 \, y_3^4 + 4 \, d\gamma \, x_1^2 \, y_3^4 + 28 \, x_2^2 \, y_3^4 + 4 \, d\gamma \, x_2^2 \, y_3^4 + 14 \, x_3^2 \, y_3^4 + 2 \, d\gamma \, x_3^2 \, y_3^4 + 28 \, y_1^2 \, y_3^4 +$$
$$4 \, d\gamma \, y_1^2 \, y_3^4 + 28 \, y_2^2 \, y_3^4 + 4 \, d\gamma \, y_2^2 \, y_3^4 - 28 \, i \, x_3 \, y_3^5 - 4 \, i \, d\gamma \, x_3 \, y_3^5 + 14 \, y_3^6 + 2 \, d\gamma \, y_3^6 - A[\![1, 8]\!] \;\; // \; \text{Expand}$$

Out[•]= 0

In[•]:= (* $Y^G{}_{\alpha_2} \;\; \pi_{1,k}$ *)

k = 8;

$$-\left(-\frac{1}{2} \, (\, (2 \, y_2 - i \, 2 \, x_2) \, D[A[\![1, k]\!], h_2] \, + (h_1 - 2 \, h_2) \, D[A[\![1, k]\!], y_2] \, - \right.$$

$$i \, (h_1 - 2 \, h_2) \, D[A[\![1, k]\!], x_2] + (x_3 + i \, y_3) \, D[A[\![1, k]\!], x_1] + (y_3 - i \, x_3) \, D[A[\![1, k]\!], y_1] \, +$$

$$\left. (-x_1 + i \, y_1) \, D[A[\![1, k]\!], x_3] + (-y_1 - i \, x_1) \, D[A[\![1, k]\!], y_3]) \right) \;\; // \; \text{Expand}$$

Out[•]= 0