Parametric Cubic Intersection

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Given two parametric curves:
$$x_1(t_1) = a_{x1}\,{t_1}^3 + b_{x1}\,{t_1}^2 + c_{x_1}\,t_1 + d_{x1}$$
$$y_1(t_1) = a_{y1}\,{t_1}^3 + b_{y1}\,{t_1}^2 + c_{y_1}\,t_1 + d_{y1}$$

$$x_2(t_2) = a_{x2}\,{t_2}^3 + b_{x2}\,{t_2}^2 + c_{x_2}\,t_2 + d_{x2}$$
$$y_2(t_2) = a_{y2}\,{t_2}^3 + b_{y2}\,{t_2}^2 + c_{y_2}\,t_2 + d_{y2}$$

This document outlines the derivation of the closed form polynomial that identifies where these two curves intersect.

The goal is to identify points that these curves have in common. So we need to identify where the coordinate (x_1, y_1) equals (x_2, y_2) . Algebraically this means we're looking at the following system (where $x_1 = x_2$ and $y_1 = y_2$):

$$a_{x1}\,{t_1}^3 + b_{x1}\,{t_1}^2 + c_{x_1}\,t_1 + d_{x1} = a_{x2}\,{t_2}^3 + b_{x2}\,{t_2}^2 + c_{x_2}\,t_2 + d_{x2}$$
$$a_{y1}\,{t_1}^3 + b_{y1}\,{t_1}^2 + c_{y_1}\,t_1 + d_{y1} = a_{y2}\,{t_2}^3 + b_{y2}\,{t_2}^2 + c_{y_2}\,t_2 + d_{y2}$$

1 Cubic Formula

There are multiple ways to solve a cubic equation. This section derives the cubic formula we will use using the Tschirnhaus Transformation and Vieta's Substitution. Our initial equation is:

$$x^3 + b\,x^2 + c\,x + d = 0$$

1.1 Apply Tschirnhaus Transformation:

Apply the Tschirnhaus Transformation: $z = x + \frac{b}{3}$

$x^3 + b\,x^2 + c\,x + d = 0$	(Given.)
$(z - \frac{b}{3})^3 + b\,(z - \frac{b}{3})^2 + c\,(z - \frac{b}{3}) + d = 0$	Substitute $x = z - \frac{b}{3}$.
$(z^3 - 3\,z^2\frac{b}{3} + 3\,z\frac{b^2}{9} - \frac{b^3}{27}) + b\,(z^2 - 2\,z\frac{b}{3} + \frac{b^2}{9}) + c\,(z - \frac{b}{3}) + d = 0$	Expand powers.
$(z^3 - z^2\,b + z\frac{b^2}{3} - \frac{b^3}{27}) + (z^2\,b - 2\,z\frac{b^2}{3} + \frac{b^3}{9}) + (z\,c - c\frac{b}{3}) + d = 0$	Distribute coefficients.
$z^3 + z^2\,(-b + b) + z\,(\frac{b^2}{3} - 2\frac{b^2}{3} + c) + (\frac{-b^3}{27} + \frac{b^3}{9} - c\frac{b}{3} + d) = 0$	Factor z terms.
$z^3 + z\,(\frac{-b^2}{3} + c) + (\frac{2\,b^3}{27} - \frac{b\,c}{3} + d) = 0$	Simplify.

Now we have a depressed cubic (that is: there is no term z^2). Let's introduce a couple of new variables to clean up the equation:

$$C = \frac{-b^2}{3} + c$$
$$D = \frac{2\,b^3}{27} - \frac{b\,c}{3} + d$$
$$z^3 + C\,z + D = 0$$

1.2 Use Vieta's substitution:

Use Vieta's substitution: $z = w - \frac{C}{3w}$

Towards the end of this derivation we introduce j and k, which will prove helpful later on.

$z^3 + C\,z + D = 0$	(Given.)
$(w - \frac{C}{3w})^3 + C\,(w - \frac{C}{3w}) + D = 0$	Substitute $z = w - \frac{C}{3w}$.
$(w^3 - 3\,w^2\,\frac{C}{3w} + 3\,w\,\frac{C^2}{9\,w^2} - \frac{C^3}{27\,w^3}) + C\,(w - \frac{C}{3w}) + D = 0$	Expand powers.
$w^3 - w\,C + \frac{C^2}{3\,w} - \frac{C^3}{27\,w^3} + w\,C - \frac{C^2}{3w} + D = 0$	Remove parentheses.
$w^3 + D - \frac{C^3}{27\,w^3} = 0$	Simplify.
$w^6 + D\,w^3 - \frac{C^3}{27} = 0$	Multiply by w^3
$w^3 = \frac{-D \pm \sqrt{D^2 + 4\,C^3/27}}{2}$	Apply the quadratic formula.
$w^3 = \frac{-D}{2} \pm \sqrt{\frac{D^2}{4} + \frac{C^3}{27}}$	Simplify.
$j = \pm\sqrt{\frac{D^2}{4} + \frac{C^3}{27}}$	Define j.
$k = \frac{-D}{2} + j$	Define k.
$w^3 = k$	Substitute k.
$w = k^{1/3}$	Solve for w.

State x in terms of w:

$z = w - \frac{C}{3w}$	(Given.)
$z = x + \frac{b}{3}$	(Given.)
$x + \frac{b}{3} = w - \frac{C}{3w}$	Transitive property.
$x = w - \frac{C}{3w} - \frac{b}{3}$	Subtract $\frac{b}{3}$.

2 Fractional Cubic Root Elimination

This section addresses an obstacle that will appear shortly. Here we eliminate the fractional roots in this equation:

$$c_1 \, k^{1/3} + c_2 \, k^{2/3} = z$$

(I'm not sure if this transformation has a more official name, but I'll refer to it here simply as "Fractional Cubic Root Elimination".)

$c_1 \, k^{1/3} + c_2 \, k^{2/3} + c_3 = 0$	(Given.)
$c_1 \, k^{1/3} \left(1 + \frac{c_2}{c_1} \, k^{1/3}\right) = -c_3$	Factor the left-hand side by $c_1 \, k^{1/3}$.
$1 + \frac{c_2}{c_1} \, k^{1/3} = \frac{-c_3}{c_1 k^{1/3}}$	Divide both sides by $c_1 \, k^{1/3}$.
$1 + 3\frac{c_2}{c_1} \, k^{1/3} + 3\frac{c_2{}^2}{c_1{}^2} \, k^{2/3} + \frac{c_2{}^3}{c_1{}^3} \, k = \frac{(-c_3)^3}{c_1{}^3 k}$	Cube both sides of the equation.
$c_1{}^3 \, k + 3\,c_1{}^2 \, c_2 \, k^{4/3} + 3\,c_1 \, c_2{}^2 \, k^{5/3} + c_2{}^3 \, k^2 = -c_3{}^3$	Multiply both sides by $c_1{}^3 \, k$.
$3\,c_1{}^2 \, c_2 \, k^{4/3} + 3\,c_1 \, c_2{}^2 \, k^{5/3} = -c_3{}^3 - c_1{}^3 \, k - c_2{}^3 \, k^2$	Isolate fractional exponents.
$c_1 \, k^{1/3} + c_2 \, k^{2/3} = \frac{-c_3{}^3 - c_1{}^3 \, k - c_2{}^3 \, k^2}{3\,c_1 \, c_2 \, k}$	Divide by $3\,c_1 \, c_2 \, k$.

The left-hand side of the last equation resembles to the left-hand of the first equation, so it follows that:

$$\frac{-c_3{}^3 - c_1{}^3 \, k - c_2{}^3 \, k^2}{3\,c_1 \, c_2 \, k} = -c_3$$

So when we encounter the first equation, we can replace it with this equivalent equation:

$$-c_3{}^3 - c_1{}^3 \, k - c_2{}^3 \, k^2 + 3\,c_1 \, c_2 \, c_3 \, k = 0$$

3 Derivation

The previous two sections outlined formulas/transformations that will be used to address the original problem. This section details the actual derivation. The end goal is a single polynomial expression that identifies where two curves intersect, and the beginning equations are:

$$a_{x1} \, t_1{}^3 + b_{x1} \, t_1{}^2 + c_{x_1} \, t_1 + d_{x1} = a_{x2} \, t_2{}^3 + b_{x2} \, t_2{}^2 + c_{x_2} \, t_2 + d_{x2}$$
$$a_{y1} \, t_1{}^3 + b_{y1} \, t_1{}^2 + c_{y_1} \, t_1 + d_{y1} = a_{y2} \, t_2{}^3 + b_{y2} \, t_2{}^2 + c_{y_2} \, t_2 + d_{y2}$$

Starting with:
$$a_{x1} \, t_1{}^3 + b_{x1} \, t_1{}^2 + c_{x1} \, t_1 + (d_{x1} - a_{x2} \, t_2{}^3 - b_{x2} \, t_2{}^2 - c_{x2} \, t_2 - d_{x2}) = 0$$

Introduce a few variables to simplify this equation:
$$a = \tfrac{b_{x1}}{a_{x1}}$$

$$b = \tfrac{c_{x1}}{a_{x1}}$$

$$c = \tfrac{d_{x1}}{a_{x1}} + \tfrac{-a_{x2} \, t_2{}^3}{a_{x1}} + \tfrac{-b_{x2} \, t_2{}^2}{a_{x1}} + \tfrac{-c_{x2} \, t_2}{a_{x1}} + \tfrac{-d_{x2}}{a_{x1}}$$

$$t_1{}^3 + a \, t_1{}^2 + b \, t_1 + c = 0$$

Apply a Tschirnhaus transform by substituting $t_1 = z + \tfrac{-a}{3}$:
$$z^3 + z \left(\tfrac{-a^2}{3} + b \right) + \left(\tfrac{2 \, a^3}{27} + c + \tfrac{-a \, b}{3} \right) = 0$$

Introduce a few more variables to simplify this equation:
$$p = \left(\tfrac{-a^2}{3} + b \right)$$

$$q = \left(\tfrac{2 \, a^3}{27} + c + \tfrac{-a \, b}{3} \right) = 0$$

$$z^3 + p \, z + q = 0$$

Apply Vieta's Substitution, $z = m + \tfrac{-p}{3 \, m}$:
$$m^3 + q + \tfrac{-p^3}{27} \, m^{-3} = 0$$

Define $m = k^{1/3}$:
$$k + q + \tfrac{-p^3}{27} \, k^{-1} = 0$$

Multiply by k to produce a simple quadratic equation:
$$k^2 + q \, k + \tfrac{-p^3}{27}$$

We can apply the quadratic formula to this equation to solve for k:

$$v = \frac{q^2}{4} + \frac{p^3}{27}$$

$$k = \frac{-q}{2} + v^{1/2}$$

Combine the definitions used for the Tschirnhaus transform, the Vieta substitution, and m to redefine t_1:

$$t_1 = k^{1/3} + \frac{-a}{3} + \frac{-p}{3}\, k^{-1/3} = 0$$

Now reconsider the y-equation:

$$a_{y1}\, t_1{}^3 + b_{y1}\, t_1{}^2 + c_{y1}\, t_1 + (d_{y1} - a_{y2}\, t_2{}^3 - b_{y2}\, t_2{}^2 - c_{y2}\, t_2 - d_{y2}) = 0$$

Substitute in our new definition of t_1:

$$-a_{y2}\, t_2{}^3 + -b_{y2}\, t_2{}^2 + -c_{y2}\, t_2 + (d_{y1} - d_{y2} + \frac{-a^3\, a_{y1}}{27} + a_{y1}\, k + \frac{a^2\, b_{y1}}{9} + \frac{-2\, b_{y1}\, p}{3} + b_{y1}\, k^{2/3} +$$
$$\frac{-a\, c_{y1}}{3} + c_{y1}\, k^{1/3} + \frac{2\, a\, a_{y1}\, p}{3} - a\, a_{y1}\, k^{2/3} + \frac{a^2\, a_{y1}\, k^{1/3}}{3} - a_{y1}\, k^{1/3}\, p + \frac{a_{y1}\, p^2}{3\, k^{1/3}} + \frac{-a_{y1}\, p^3}{27\, k} + \frac{-2\, a\, b_{y1}\, k^{1/3}}{3} +$$
$$\frac{b_{y1}\, p^2}{9\, k^{2/3}} + \frac{-c_{y1}\, p}{3\, k^{1/3}} + \frac{-a\, a_{y1}\, p^2}{9\, k^{2/3}} + \frac{-a^2\, a_{y1}\, p}{9\, k^{1/3}} + \frac{2\, a\, b_{y1}\, p}{9\, k^{1/3}}) = 0$$

However k is expressed as a cubic root, so we have to apply a fractional cubic root elimination. This means everything has to be cubed.

Then there is also a square root inside k, so we have to tease that out: so we'll have to square everything to resolve v.

We'll also have to apply all the substitutions we previously made to simplify this equation. The end result is an equation that is 42055-many terms long, so the next section is devoted simply to stating the c coefficients in this equation:

$$c_{18}\, t_2^{18} + c_{17}\, t_2^{17} + c_{16}\, t_2^{16} + c_{15}\, t_2^{15} + c_{14}\, t_2^{14} + c_{13}\, t_2^{13} + \dots + c_3\, t_2^3 + c_2\, t_2^2 + c_1\, t_2 + c_0 = 0$$

In this equation all the c terms are expressed in terms of the constants (a_{x1}, b_{x1}, c_{x1} etc.) used to define the two cubic parametric curves, so the only remaining variable is t_2.

4 Coefficient Definitions

This section states the definition of coefficients in this equation:

$$c_{18}\, t_2^{18} + c_{17}\, t_2^{17} + c_{16}\, t_2^{16} + c_{15}\, t_2^{15} + c_{14}\, t_2^{14} + c_{13}\, t_2^{13} + ... + c_3\, t_2^3 + c_2\, t_2^2 + c_1\, t_2 + c_0 = 0$$

$c_0 = (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^6 - 6\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^5\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^6 + (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^4 + (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2})^2 + (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^4 - 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^3\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^3 - 6\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^5 + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 + 15\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^4\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 15\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^4 - 20\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3 + (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2})^2 + 7\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 - 1\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^4\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2 + 3\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1})^2 + 7\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2})^2 + 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 - 1\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^4\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2 + 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 6\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 8\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 12\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) + 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) + 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 8\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 + 2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^5\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^4\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^5\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 10\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^4\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^4\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 20\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^4\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 10\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^4\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 30\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^4\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 20\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 60\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(d_{x1}\, d_{y2} -$

$d_{x2}\,d_{y1}) - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})^2 +$
$20\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} -$
$a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2 + 60\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} -$
$a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} -$
$c_{y1}\,d_{x2}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(d_{x1}\,d_{y2} -$
$d_{x2}\,d_{y1}) + 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^3 -$
$8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) + 8\,(a_{x1}\,b_{y1} -$
$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^3 + 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y1} -$
$b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 10\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} -$
$a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} -$
$d_{x2}\,d_{y1}) - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 +$
$10\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 6\,(a_{x1}\,b_{y1} -$
$a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} -$
$a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1} -$
$b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} -$
$d_{x2}\,d_{y1}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) +$
$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2 + 4\,(a_{x1}\,b_{y1} -$
$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})^2 + 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} -$
$a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} -$
$b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) -$
$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})^2 + 2\,(a_{x1}\,b_{y1} -$
$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 10\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} -$
$b_{y1}\,d_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} -$
$b_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) + 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) +$
$18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) -$
$2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 2\,(a_{x1}\,b_{y1} -$
$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} -$
$a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2 - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} -$
$b_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})^3 - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} -$
$a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} -$
$a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})^2 - 10\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} -$
$b_{y1}\,c_{x1})^3 - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} -$
$b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y1} -$
$c_{y1}\,d_{x1}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(d_{x1}\,d_{y2} -$
$d_{x2}\,d_{y1}) + 16\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) +$
$10\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} -$
$a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2} -$
$c_{y1}\,d_{x2})^2 + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1})^2 + 10\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} -$
$a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^3 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} -$
$b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 + 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y2} -$
$c_{y1}\,d_{x2}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} -$

$$c_{y1}\,d_{x1}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 10\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 16\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) + 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^3 + 8\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2 - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 8\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 6\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2 - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2 + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1})^2 - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) + 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 42\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})$$

$$c_1 = 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^3 + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^3 - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 6\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^5 + 30\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^4\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) - 60\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2 + 60\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3 - 30\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^4 + 6\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^5 - 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^4\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 32\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 8\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 144\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 96\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} -$$

$a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^4\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+84\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+24\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-42\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})^2+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-42\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})^2+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+10\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^4\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+10\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+4\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3-20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-$

$$c_{y1}\,d_{x2})^2 - 2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^3 + 16\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} -$$

$$a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y2} -$$

$$b_{y1}\,c_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1} -$$

$$c_{x2}\,d_{y1}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} -$$

$$b_{y1}\,d_{x1})^2 - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) +$$

$$6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) -$$

$$6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 - 36\,(a_{x1}\,b_{y1} -$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} -$$

$$b_{y1}\,d_{x2}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) +$$

$$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) -$$

$$24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) +$$

$$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 +$$

$$12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1}) - 10\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} -$$

$$a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1}) + 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} -$$

$$b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 8\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x2}\,d_{y2} -$$

$$c_{y2}\,d_{x2}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) -$$

$$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) +$$

$$4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) + 8\,(a_{x1}\,b_{y1} -$$

$$a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1}) + 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} -$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^3 + 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(c_{x1}\,c_{y2} -$$

$$c_{x2}\,c_{y1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 54\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} -$$

$$b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 16\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1})\,(d_{x1}\,d_{y2} -$$

$$d_{x2}\,d_{y1}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1} -$$

$$c_{x2}\,d_{y1}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} -$$

$$b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 4\,(a_{x1}\,c_{y1} -$$

$$a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 10\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} -$$

$$a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(c_{x1}\,d_{y2} -$$

$$c_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 28\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})\,(d_{x1}\,d_{y2} -$$

$$d_{x2}\,d_{y1}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1}) +$$

$$30\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 24\,(a_{x1}\,b_{y1} -$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 + 8\,(a_{x1}\,b_{y1} -$$

$$a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} -$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^3 + 8\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y1} -$$

$$b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} -$$

$$b_{y1}\,d_{x1}) - 12\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2 +$$

$$12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 12\,(a_{x1}\,c_{y1} -$$

$$a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 - 42\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} -$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) + 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} -$$

$$a_{y1}\,c_{x1})^2\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} -$$

$$a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} -$$

$$b_{y1}\,d_{x1}) + 12\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2 -$$

$8\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) + 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 16\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) - 24\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 48\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) + 18\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 24\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 16\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 18\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 36\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) - 72\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 72\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})$

$c_2 = 3\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2 + 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 + 21\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})^2 + 9\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})^2 + 21\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})^2 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2})^2 + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2})^2 - 6\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2 + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 + (a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})^2 + 15\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^4 + 90\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2 + 15\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^4 + (a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})^2 - 6\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^5 + 30\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^4\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) - 60\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2 - 60\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) + 60\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3 - 30\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^4 - 60\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3 + 6\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^5 - 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^3 + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^3 + 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})^2 - 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2\,(b_{y2}\,c_{x1} -$

$b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+10\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^4\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-$

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$a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1})\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 12\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 6\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2})^2 + 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 12\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 24\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + 84\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 36\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 40\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 20\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 60\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 60\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 36\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 24\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2})^2 - 18\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 64\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 60\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 10\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^4\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 8\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 42\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1})\, (d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 4\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 4\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 24\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\, (b_{x2}\, d_{y2} - b_{y2}\, d_{x2}) - 6\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (c_{x2}\, d_{y2} - c_{y2}\, d_{x2}) + 6\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) + 4\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\, (b_{x2}\, d_{y2} - b_{y2}\, d_{x2}) - 4\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\, (b_{y2}\, d_{x1} - b_{x2}\, d_{y1}) + 6\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (b_{x2}\, d_{y2} - b_{y2}\, d_{x2}) - 6\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\, (b_{x2}\, d_{y2} - b_{y2}\, d_{x2}) + 6\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (b_{y2}\, d_{x1} - b_{x2}\, d_{y1}) + 36\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 36\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 72\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 72\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) + 12\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (c_{x2}\, d_{y2} - c_{y2}\, d_{x2}) + 24\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\, (b_{x1}\, b_{y2} - b_{x2}\, b_{y1}) - 18\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 48\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\, (b_{y2}\, d_{x1} - b_{x2}\, d_{y1}) - 12\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) + 72\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) + 18\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 36\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 12\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - $

$$72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2}) - 18\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1}) - 24\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2}) - 4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) + 36\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2}) - 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1}) + 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1}) + 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^3 + 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2}) - 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^3 + 6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2}) + 4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2 - 4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2 + 4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3 + 6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1}) + 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2 - 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1}) + 6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2 - 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2 - 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1}) - 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2}) + 4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1}) - 6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2 + 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2}) - 28\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) + 24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2}) - 30\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1}) + 4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2}) + 16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) - 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) + 24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) - 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) - 24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2}) + 6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2}) - 24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2}) - 6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2 - 4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) - 36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2}) + 6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1}) - 24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2}) - 8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1}) - 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1}) + 24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2}) - 18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2 + 24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2}) + 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})^2 + 6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1}) + 12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-$$

$$b_{y1}\, d_{x1}) - 4\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{y2}\, d_{x1} - b_{x2}\, d_{y1}) +$$

$$12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) -$$

$$4\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\,(b_{y2}\, d_{x1} - b_{x2}\, d_{y1}) + 18\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 - 8\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(b_{y2}\, d_{x1} -$$

$$b_{x2}\, d_{y1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(c_{x2}\, d_{y2} - c_{y2}\, d_{x2})^2 -$$

$$12\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 12\,(a_{x1}\, b_{y1} -$$

$$a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2 - 4\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} -$$

$$a_{y1}\, c_{x1})^3\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} -$$

$$a_{y1}\, d_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} -$$

$$a_{y1}\, c_{x1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 8\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^3\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(c_{y2}\, d_{x1} -$$

$$c_{x2}\, d_{y1})^2 + 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) - 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 8\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(c_{x1}\, c_{y2} -$$

$$c_{x2}\, c_{y1})\,(c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} -$$

$$b_{y1}\, d_{x1})\,(c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) - 6\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(c_{x1}\, c_{y2} -$$

$$c_{x2}\, c_{y1}) - 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) -$$

$$6\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\,(b_{x2}\, d_{y2} - b_{y2}\, d_{x2}) + 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} -$$

$$a_{y1}\, c_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(c_{x2}\, d_{y2} - c_{y2}\, d_{x2}) + 4\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y2} -$$

$$a_{y1}\, d_{x2})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x2}\, d_{y2} - b_{y2}\, d_{x2}) + 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} -$$

$$a_{y1}\, d_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(c_{x2}\, d_{y2} -$$

$$c_{y2}\, d_{x2}) + 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) +$$

$$8\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 16\,(a_{x1}\, b_{y1} -$$

$$a_{y1}\, b_{x1})^3\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(c_{y2}\, d_{x1} - c_{x2}\, d_{y1})\,(c_{x2}\, d_{y2} - c_{y2}\, d_{x2}) - 2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) + 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(c_{x1}\, d_{y1} -$$

$$c_{y1}\, d_{x1})^2 + 8\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) -$$

$$12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(c_{y2}\, d_{x1} - c_{x2}\, d_{y1})^2 - 12\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} -$$

$$a_{y1}\, d_{x1})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} -$$

$$a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(b_{y2}\, d_{x1} - b_{x2}\, d_{y1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 18\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} -$$

$$a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 - 18\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} -$$

$$a_{y1}\, d_{x2})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2 + 36\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} -$$

$$a_{y1}\, d_{x2})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 48\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} -$$

$$a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y1} -$$

$$a_{y1}\, d_{x1})^2\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} -$$

$$a_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(b_{x1}\, c_{y1} -$$

$$b_{y1}\, c_{x1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} -$$

$$a_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + 2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^3\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 -$$

$$6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 - 6\,(a_{x1}\, b_{y1} -$$

$$a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + 10\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^3\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1})\,(c_{x1}\, d_{y1} -$$

$$c_{y1}\, d_{x1})^2 - 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 +$$

$$4\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^3 + 6\,(a_{x1}\, b_{y1} -$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-30\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})^2-2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3-14\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})^2+10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-54\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-60\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})$$

$$c_3 = -6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^5+30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+30\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2-120\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2}) - 20\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3 + 60\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^3 + 180\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2 +$$
$$60\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) - 30\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^4 - 120\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^3 - 60\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2 + 6\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^5 + 30\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^4 + 20\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^3 - 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} -$$
$$a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^3 + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2} -$$
$$b_{y1}\,d_{x2}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 -$$
$$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 24\,(a_{x1}\,b_{y1} -$$
$$a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 4\,(a_{x1}\,b_{y1} -$$
$$a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} -$$
$$c_{y1}\,d_{x2}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^3 + 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^4\,(b_{y2}\,c_{x1} -$$
$$b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} -$$
$$b_{y1}\,d_{x2})^2 + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(a_{y2}\,c_{x1} -$$
$$a_{x2}\,c_{y1}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) +$$
$$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 24\,(a_{x1}\,a_{y2} -$$
$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})^4\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) - 8\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(c_{x1}\,d_{y2} -$$
$$c_{y1}\,d_{x2}) - 16\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) -$$
$$32\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 6\,(a_{x1}\,c_{y1} -$$
$$a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 144\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} -$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 60\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) + 96\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^2\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) + 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1} -$$
$$a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2} -$$
$$b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) - 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(a_{y2}\,c_{x1} -$$
$$a_{x2}\,c_{y1}) - 40\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1}) -$$
$$96\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) +$$
$$2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(b_{x1}\,b_{y2} -$$
$$b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(c_{x1}\,d_{y2} -$$
$$c_{y1}\,d_{x2}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^4\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) + 10\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^4\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) + 32\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(c_{x1}\,c_{y2} -$$
$$c_{x2}\,c_{y1}) - 6\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) +$$
$$24\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) -$$

$12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-$

$8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-$

$a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-$

$a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2+$

$6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+10\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-$

$b_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-$

$b_{y1}\,d_{x1})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+$

$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+$

$24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-$

$4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+$

$6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y2}-$

$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+8\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-$

$a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2}-$

$b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{x1}\,c_{y2}-$

$c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-$

$b_{y1}\,c_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y2}-$

$b_{y1}\,d_{x2})^2-20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y2}-$

$b_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-$

$b_{y1}\,d_{x2})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+$

$6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+24\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-$

$a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-$

$a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-$

$a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+10\,(a_{x1}\,a_{y2}-$

$a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+20\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-$

$b_{y1}\,c_{x1})-32\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+$

$6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-54\,(a_{x1}\,a_{y2}-$

$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})^2-84\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-$

$a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x2} d_{y2} - a_{y2} d_{x2}) (d_{x1} d_{y2} - d_{x2} d_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2})^2 - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{x2} d_{y2} - a_{y2} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 20 (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1})^2 - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1})^2 - 4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1})^2 + 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1})^2 + 40 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) + 40 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 2 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x2} d_{y2} - a_{y2} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) - 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x2} d_{y2} - c_{y2} d_{x2}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) - 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{y2} d_{x1} - c_{x2} d_{y1}) - 40 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (b_{x2} c_{y2} - b_{y2} c_{x2}) - 88 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) + 72 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (c_{y2} d_{x1} - c_{x2} d_{y1}) - 72 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (d_{x1} d_{y2} - d_{x2} d_{y1}) + 72 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) + 72 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (c_{x2} d_{y2} - c_{y2} d_{x2}) + 144 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 48 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) - 120 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} -$

$a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-$

$72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+$

$12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-144\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-12\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$

$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y2}-$

$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-$

$a_{y1}\,c_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2}-$

$c_{y1}\,d_{x2})-36\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-$

$c_{y1}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-$

$6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-$

$a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+40\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y2}-$

$b_{y1}\,c_{x2})-24\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+$

$24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$

$a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-$

$a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-16\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-$

$a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-$

$b_{y2}\,c_{x2})+8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})-$

$8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-$

$32\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-$

$a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2}-$

$b_{y1}\,d_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-40\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y1}-$

$b_{y1}\,c_{x1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-$

$b_{x2}\,c_{y1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+$

$8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^3-8\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^3+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,d_{y2}-$

$b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-$

$b_{y1}\,d_{x2})^3-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-$

$8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^3+6\,(a_{x1}\,c_{y1}-$

$a_{y1}\,c_{x1})^4\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-$

$a_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-$

$4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+16\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-$

$a_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1})^2 + 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) + 10 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1})^2 - 12 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y1} - b_{y1} d_{x1})^2 - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 2 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1})^3 - 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^4 (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 16 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 16 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (b_{x2} c_{y2} - b_{y2} c_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2}) - 12 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x2} d_{y2} - c_{y2} d_{x2}) + 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2})^2 - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1})^2 + 4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (d_{x1} d_{y2} - d_{x2} d_{y1}) + 16 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 16 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{y2} d_{x1} - c_{x2} d_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) (c_{x2} d_{y2} - c_{y2} d_{x2}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{y2} d_{x1} - b_{x2} d_{y1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} d_{y1} - b_{y1} d_{x1})^2 - 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2})^2 + 16 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2})^2 - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 2 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} c_{y1} - b_{y1} c_{x1})^3 - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (d_{x1} d_{y2} - d_{x2} d_{y1}) + 10 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2})^2 + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1})^2 - 2 (a_{x1} c_{y1} - a_{y1} c_{x1})^4 (a_{x2} d_{y2} - a_{y2} d_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x2} d_{y2} - a_{y2} d_{x2}) (d_{x1} d_{y2} - d_{x2} d_{y1}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x2} d_{y2} - a_{y2} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{x2} d_{y2} - a_{y2} d_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} d_{y1} - b_{y1} d_{x1})^2 + 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^4 (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 16 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (b_{x2} c_{y2} - b_{y2} c_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{y2} d_{x1} - b_{x2} d_{y1}) (d_{x1} d_{y2} - d_{x2} d_{y1}) + 12 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 24 (a_{x1} b_{y1} -$

$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-6\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})^2-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-$
$b_{y2}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(d_{x1}\,d_{y2}-$
$d_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+$
$30\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+24\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-8\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$
$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$
$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-8\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-40\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-$
$a_{y2}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-$
$b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,d_{y2}-$
$a_{y2}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-$
$b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-$
$a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-$
$b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-$
$b_{y1}\,c_{x1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-$
$b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-$
$b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-$
$b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-$
$b_{y2}\,c_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(d_{x1}\,d_{y2}-$
$d_{x2}\,d_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-$
$16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-8\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-$
$b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{y2}\,b_{x1}-$
$a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-$
$b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-$
$b_{y1}\,d_{x1})-8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-$
$6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+$
$12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,c_{y1}-$
$a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,d_{y2}-$
$b_{y1}\,d_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-$

$a_{y1} \, d_{x2}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1})^2 + 6 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (b_{x1} \, d_{y2} - b_{y1} \, d_{x2})^2 \, (b_{x2} \, c_{y2} - b_{y2} \, c_{x2}) + 24 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (a_{y2} \, b_{x1} - a_{x2} \, b_{y1}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2})^2 \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (a_{y2} \, d_{x1} - a_{x2} \, d_{y1}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) - 4 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^3 \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (b_{x2} \, d_{y2} - b_{y2} \, d_{x2}) \, (c_{x2} \, d_{y2} - c_{y2} \, d_{x2}) + 36 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (b_{x2} \, d_{y2} - b_{y2} \, d_{x2}) \, (c_{y2} \, d_{x1} - c_{x2} \, d_{y1}) - 24 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, d_{y2} - b_{y1} \, d_{x2}) \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2}) + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (b_{x2} \, c_{y2} - b_{y2} \, c_{x2}) \, (d_{x1} \, d_{y2} - d_{x2} \, d_{y1}) - 12 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2})^2 \, (a_{y2} \, b_{x1} - a_{x2} \, b_{y1}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) - 24 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) \, (b_{y2} \, d_{x1} - b_{x2} \, d_{y1}) - 24 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (a_{y2} \, b_{x1} - a_{x2} \, b_{y1}) \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2}) - 24 \, (a_{x1} \, b_{y2} - a_{y1} \, b_{x2}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) + 24 \, (a_{x1} \, a_{y2} - a_{x2} \, a_{y1}) \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2}) \, (d_{x1} \, d_{y2} - d_{x2} \, d_{y1}) + 24 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) \, (b_{y2} \, d_{x1} - b_{x2} \, d_{y1}) - 8 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2})^2 \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) + 24 \, (a_{x1} \, b_{y2} - a_{y1} \, b_{x2}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1})^2 + 6 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2})^2 \, (c_{x1} \, c_{y2} - c_{x2} \, c_{y1}) - 72 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{y2} \, c_{x1} - b_{x2} \, c_{y1}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) + 12 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1})^2 \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) - 24 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, d_{y2} - b_{y1} \, d_{x2}) + 24 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{y2} \, b_{x1} - a_{x2} \, b_{y1}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (d_{x1} \, d_{y2} - d_{x2} \, d_{y1}) + 18 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, b_{y2} - a_{y1} \, b_{x2}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1})^2 + 4 \, (a_{x1} \, a_{y2} - a_{x2} \, a_{y1}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1})^3 + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (b_{y2} \, c_{x1} - b_{x2} \, c_{y1}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) - 12 \, (a_{x1} \, a_{y2} - a_{x2} \, a_{y1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) \, (b_{x1} \, d_{y2} - b_{y1} \, d_{x2}) + 8 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2})^3 \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) + 8 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^3 \, (a_{y2} \, b_{x1} - a_{x2} \, b_{y1}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) \, (b_{x1} \, d_{y2} - b_{y1} \, d_{x2}) - 12 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2})^2 \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) - 20 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^3 \, (a_{y2} \, c_{x1} - a_{x2} \, c_{y1}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2}) + 8 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2})^2 \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2}) + 4 \, (a_{x1} \, b_{y2} - a_{y1} \, b_{x2}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y1} - a_{y1} \, d_{x1}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1})^3 - 6 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2})^2 \, (c_{x1} \, c_{y2} - c_{x2} \, c_{y1}) + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (c_{y2} \, d_{x1} - c_{x2} \, d_{y1}) + 12 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2})^2 \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) - 12 \, (a_{x1} \, b_{y2} - a_{y1} \, b_{x2}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) + 24 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2}) + 8 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^3 \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, c_{y2} - b_{y1} \, c_{x2}) \, (b_{x1} \, d_{y1} - b_{y1} \, d_{x1}) + 18 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, b_{y2} - a_{y1} \, b_{x2}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2})^2 - 20 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^3 \, (b_{y2} \, c_{x1} - b_{x2} \, c_{y1}) \, (c_{x1} \, c_{y2} - c_{x2} \, c_{y1}) \, (c_{x1} \, d_{y1} - c_{y1} \, d_{x1}) + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1})^2 \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{y2} \, c_{x1} - b_{x2} \, c_{y1}) \, (c_{x1} \, d_{y2} - c_{y1} \, d_{x2}) - 4 \, (a_{x1} \, b_{y2} - a_{y1} \, b_{x2}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2}) \, (a_{x1} \, d_{y2} - a_{y1} \, d_{x2}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1})^3 - 8 \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1}) \, (a_{x1} \, c_{y2} - a_{y1} \, c_{x2})^3 \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (b_{x1} \, d_{y2} - b_{y1} \, d_{x2}) + 12 \, (a_{x1} \, b_{y1} - a_{y1} \, b_{x1}) \, (a_{x1} \, c_{y1} - a_{y1} \, c_{x1})^2 \, (b_{x1} \, b_{y2} - b_{x2} \, b_{y1}) \, (b_{x1} \, c_{y1} - b_{y1} \, c_{x1}) \, (c_{x2} \, d_{y2} - c_{y2} \, d_{x2}) +$

$12 \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right)^2 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^2 \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right) + 12 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right)^2 \left(b_{x1} c_{y1} - b_{y1} c_{x1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right) - 2 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^3 \left(c_{x1} c_{y2} - c_{x2} c_{y1}\right)^3 - 8 \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right)^3 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right) - 4 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) \left(b_{x1} c_{y1} - b_{y1} c_{x1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) \left(c_{x1} c_{y2} - c_{x2} c_{y1}\right) + 20 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^3 \left(b_{y2} c_{x1} - b_{x2} c_{y1}\right) \left(c_{x1} c_{y2} - c_{x2} c_{y1}\right) \left(c_{x1} d_{y2} - c_{y1} d_{x2}\right)$

$c_4 = 30 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^4 + 15 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^4 - 120 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) - 60 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) - 60 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 + 180 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^2 + 90 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^2 + 180 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) + 15 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^4 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 - 120 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right) \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^3 - 60 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right) \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^3 - 180 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right) \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^2 - 30 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^4 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right) \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) + 30 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^4 + 15 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^4 + 60 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^3 + 15 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^4 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^2 + 12 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) \left(b_{x1} d_{y1} - b_{y1} d_{x1}\right)^2 + 6 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)^2 \left(b_{x1} d_{y1} - b_{y1} d_{x1}\right)^2 - 24 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) \left(b_{x1} d_{y1} - b_{y1} d_{x1}\right) \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right) - 12 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)^2 \left(b_{x1} d_{y1} - b_{y1} d_{x1}\right) \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right) - 12 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right)^2 \left(b_{x1} d_{y1} - b_{y1} d_{x1}\right) + 2 \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right)^4 \left(a_{y2} c_{x1} - a_{x2} c_{y1}\right) \left(c_{x1} c_{y2} - c_{x2} c_{y1}\right) + 12 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right)^2 + \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right)^4 \left(b_{y2} c_{x1} - b_{x2} c_{y1}\right)^2 + 6 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)^2 \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right)^2 + 12 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right)^2 \left(b_{x1} d_{y2} - b_{y1} d_{x2}\right) + \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right)^4 + 21 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(c_{x1} d_{y1} - c_{y1} d_{x1}\right)^2 + 3 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(b_{y2} c_{x1} - b_{x2} c_{y1}\right)^2 + 6 \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right)^2 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)^2 + 21 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(c_{x1} d_{y2} - c_{y1} d_{x2}\right)^2 + 3 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^2 \left(b_{y2} c_{x1} - b_{x2} c_{y1}\right)^2 + 6 \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right)^2 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)^2 + 6 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^2 \left(c_{x1} c_{y2} - c_{x2} c_{y1}\right)^2 + \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(b_{x1} c_{y1} - b_{y1} c_{x1}\right)^2 \left(b_{y2} c_{x1} - b_{x2} c_{y1}\right)^2 + 12 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) + 20 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)^2 - 96 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 \left(c_{x1} c_{y2} - c_{x2} c_{y1}\right) - 24 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 \left(b_{y2} c_{x1} - b_{x2} c_{y1}\right) - 40 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^3 \left(b_{x1} c_{y1} - b_{y1} c_{x1}\right) - 36 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) - 18 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)^2 + 96 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) \left(c_{x1} c_{y2} - c_{x2} c_{y1}\right) + 144 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) \left(b_{y2} c_{x1} - b_{x2} c_{y1}\right) + 48 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right) \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right)^2 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) \left(b_{x1} c_{y2} - b_{y1} c_{x2}\right) + 36 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right) \left(a_{x1} d_{y2} -$

$a_{y1} d_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 18 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 - 96 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) - 144 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 48 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) - 20 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 + 96 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (b_{y2} c_{x1} - b_{x2} c_{y1}) + 40 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 12 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 6 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 6 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} d_{y1} - b_{y1} d_{x1})^2 - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} d_{y1} - b_{y1} d_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 12 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 6 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} d_{y2} - b_{y1} d_{x2})^2 - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} d_{y2} - b_{y1} d_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) + 144 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) - 20 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 24 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) + 60 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) - 96 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} -$

$$\begin{aligned}
&a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 84 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 84 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - \\
&a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 42 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - \\
&a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (d_{x1} d_{y2} - d_{x2} d_{y1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - \\
&a_{y1} b_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) + 144 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - \\
&a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - \\
&a_{y1} d_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - \\
&a_{y1} c_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - \\
&a_{y1} c_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 12 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) - 24 (a_{x1} b_{y2} - \\
&a_{y1} b_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 20 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y2} - \\
&a_{y1} d_{x2})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 60 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} c_{y1} - \\
&b_{y1} c_{x1}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y1} - \\
&c_{y1} d_{x1}) - 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + \\
&4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + \\
&2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 12 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 48 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 36 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 6 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - \\
&a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 24 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - \\
&a_{y1} c_{x2})^4 (c_{x1} d_{y1} - c_{y1} d_{x1}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} c_{y2} - \\
&c_{x2} c_{y1}) - 48 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} d_{y2} - \\
&c_{y1} d_{x2}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - \\
&c_{y1} d_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + \\
&24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 6 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^4 (c_{x1} d_{y2} - c_{y1} d_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} c_{x1} - \\
&a_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 10 (a_{x1} c_{y2} - a_{y1} c_{x2})^4 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) + \\
&10 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 10 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - \\
&a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 4 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 6 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 12 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1})^2 + 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} c_{x1} - \\
&a_{x2} c_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (c_{x1} c_{y2} - \\
&c_{x2} c_{y1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1})^2 - \\
&24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) - 4 (a_{x1} b_{y1} - \\
&a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 6 (a_{x1} b_{y2} - \\
&a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - \\
&b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} -
\end{aligned}$$

$$a_{y1} b_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 20 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{y2} c_{x1} -$$

$$a_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 10 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{y2} c_{x1} - b_{x2} c_{y1})^2 (c_{x1} d_{y2} -$$

$$c_{y1} d_{x2}) - 48 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} d_{y2} -$$

$$b_{y1} d_{x2}) - 20 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) -$$

$$10 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{y2} c_{x1} - b_{x2} c_{y1})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) - 2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} -$$

$$a_{y1} c_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1})^2 + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} c_{y2} -$$

$$b_{y1} c_{x2}) (c_{x2} d_{y2} - c_{y2} d_{x2}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} -$$

$$b_{y1} c_{x2})^2 - 6 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2}) +$$

$$6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 6 (a_{x1} b_{y1} -$$

$$a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{y2} d_{x1} - b_{x2} d_{y1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} -$$

$$a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2})^3 - 10 (a_{x1} c_{y2} - a_{y1} c_{x2})^4 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} c_{y1} -$$

$$b_{y1} c_{x1}) - 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} d_{x1} - b_{x2} d_{y1})^2 + 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} d_{y2} -$$

$$a_{y1} d_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2})^2 - 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x2} d_{y2} - b_{y2} d_{x2})^2 +$$

$$6 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{y2} d_{x1} - b_{x2} d_{y1})^2 - 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y1} -$$

$$b_{y1} c_{x1})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 8 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y1} -$$

$$b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 72 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} -$$

$$a_{y1} c_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (c_{x2} d_{y2} - c_{y2} d_{x2}) - 72 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} -$$

$$a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{y2} d_{x1} - b_{x2} d_{y1}) - 72 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} -$$

$$a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) - 144 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} -$$

$$a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} -$$

$$a_{y1} c_{x1})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (b_{x1} d_{y1} -$$

$$b_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{y2} c_{x1} -$$

$$b_{x2} c_{y1}) + 8 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{x1} c_{y2} -$$

$$c_{x2} c_{y1}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x2} c_{y2} - a_{y2} c_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) -$$

$$12 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 24 (a_{x1} b_{y1} -$$

$$a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^3 (a_{y2} c_{x1} - a_{x2} c_{y1}) + 12 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y1} -$$

$$a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 + 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y1} -$$

$$b_{y1} c_{x1}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 4 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y1} -$$

$$b_{y1} c_{x1})^3 - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x2} c_{y2} - a_{y2} c_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) -$$

$$12 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 + 36 (a_{x1} b_{y2} -$$

$$a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) + 4 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y2} -$$

$$a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} c_{y1} - b_{y1} c_{x1})^3 + 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} -$$

$$b_{x2} b_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^4 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 8 (a_{x1} b_{y2} -$$

$$a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} -$$

$$a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} -$$

$$a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} -$$

$$a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x2} d_{y2} - c_{y2} d_{x2}) - 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^4 (b_{x1} b_{y2} -$$

$$b_{x2} b_{y1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y2} -$$

$$b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 4 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} -$$

$$b_{y1} d_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} -$$

$$c_{x2} c_{y1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{y2} d_{x1} -$$

$$c_{x2}\,d_{y1}) - 2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^3 + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1})^2 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} -$$
$$a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^3 + 4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) +$$
$$12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) -$$
$$4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 18\,(a_{x1}\,b_{y1} -$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})^2 + 12\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2 + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y1} -$$
$$c_{y1}\,d_{x1}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^2\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2}) -$$
$$8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2} - b_{y2}\,c_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 12\,(a_{x1}\,b_{y2} -$$
$$a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 + 2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} -$$
$$a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + (a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y2} -$$
$$b_{y1}\,c_{x2})^2 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x2}\,d_{y2} -$$
$$b_{y2}\,d_{x2}) + 12\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2 + 4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 12\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1} -$$
$$b_{y1}\,d_{x1})^2 - 12\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) -$$
$$6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2}) + 12\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1} -$$
$$a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1}) - 16\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1} -$$
$$b_{x2}\,d_{y1})\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2}) + 4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{y2}\,d_{x1} - a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1} -$$
$$b_{y1}\,c_{x1}) + 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) +$$
$$36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) +$$
$$18\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1})^2 - 18\,(a_{x1}\,b_{y1} -$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1})^2 - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y2} -$$
$$b_{y1}\,c_{x2})\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 6\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x2}\,c_{y2} -$$
$$a_{y2}\,c_{x2}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2} -$$
$$b_{x2}\,b_{y1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} -$$
$$b_{y1}\,d_{x1}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} -$$
$$c_{y1}\,d_{x2}) + 4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x2}\,d_{y2} - a_{y2}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) +$$
$$12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 72\,(a_{x1}\,a_{y2} -$$
$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1}) - 24\,(a_{x1}\,b_{y1} -$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^3\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} -$$
$$a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 12\,(a_{x1}\,c_{y1} -$$
$$a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} -$$
$$a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1} -$$
$$a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) - 24\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1} -$$
$$a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 72\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} -$$
$$a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) + 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2} -$$
$$a_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} -$$
$$a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 12\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1} -$$
$$a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 12\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} -$$

$a_{y1} d_{x1}) (b_{x1} d_{y1} - b_{y1} d_{x1})^2 - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y1} -$
$b_{y1} d_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y1} -$
$b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x2} c_{y2} - a_{y2} c_{x2}) (b_{x1} d_{y1} -$
$b_{y1} d_{x1})^2 - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x2} c_{y2} - a_{y2} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) -$
$24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) -$
$6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x2} c_{y2} - a_{y2} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2})^2 + 12 (a_{x1} a_{y2} -$
$a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2})^2 - 24 (a_{x1} a_{y2} -$
$a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{x2} d_{y2} - c_{y2} d_{x2}) + 12 (a_{x1} a_{y2} -$
$a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (c_{x2} d_{y2} - c_{y2} d_{x2}) - 4 (a_{x1} b_{y1} -$
$a_{y1} b_{x1})^3 (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 8 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x2} d_{y2} -$
$a_{y2} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x2} d_{y2} - c_{y2} d_{x2}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y2} -$
$b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 72 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} -$
$a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} -$
$a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} b_{y2} -$
$b_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x2} d_{y2} -$
$b_{y2} d_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) - 72 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} -$
$a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} b_{y2} -$
$b_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{y2} d_{x1} -$
$b_{x2} d_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 (b_{y2} d_{x1} -$
$b_{x2} d_{y1}) + 16 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x2} c_{y2} - b_{y2} c_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1}) -$
$36 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) + 36 (a_{x1} b_{y1} -$
$a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 144 (a_{x1} a_{y2} -$
$a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (c_{x1} d_{y1} -$
$c_{y1} d_{x1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} -$
$b_{y1} c_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x1} c_{y2} -$
$c_{x2} c_{y1})^2 + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1})^2 - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{x1} b_{y2} -$
$b_{x2} b_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} -$
$a_{y1} d_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x2} c_{y2} -$
$b_{y2} c_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 18 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} d_{y2} -$
$c_{y1} d_{x2}) + 12 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) -$
$18 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 12 (a_{x1} b_{y2} -$
$a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 12 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} -$
$a_{y1} c_{x2})^2 (b_{y2} d_{x1} - b_{x2} d_{y1}) + 18 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} -$
$a_{y1} d_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 6 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x2} c_{y2} -$
$b_{y2} c_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y1} -$
$b_{y1} d_{x1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) +$
$4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^3 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) - 12 (a_{x1} a_{y2} -$
$a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} d_{y2} -$
$c_{y1} d_{x2}) + 18 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2})^2 +$
$12 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 36 (a_{x1} b_{y1} -$
$a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (c_{x1} d_{y2} -$

$$c_{y1}\,d_{x2}) - 36\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) +$$
$$8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{x2}\,d_{y2} - a_{y2}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^2 - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2}) + 12\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 10\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 42\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(c_{y2}\,d_{x1} - c_{x2}\,d_{y1})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) + 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x2}\,c_{y2} - b_{y2}\,c_{x2}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 60\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2}) + 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2})^2 - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(b_{y2}\,d_{x1} - b_{x2}\,d_{y1}) - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{y2}\,d_{x1} - b_{x2}\,d_{y1})^2 - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x2}\,d_{y2} - a_{y2}\,d_{x2})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{x2}\,d_{y2} - a_{y2}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 12\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 36\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) + 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2})^2 - 48\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 72\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2}) - 12\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})^2 - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1} - a_{x2}\,d_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 144\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{x2}\,c_{y2} - b_{y2}\,c_{x2}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{y2}\,d_{x1} - a_{x2}\,d_{y1})\,(c_{x2}\,d_{y2} - c_{y2}\,d_{x2}) - 72\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(d_{x1}\,d_{y2} - d_{x2}\,d_{y1}) - 72\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1}) -$$

$144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-72\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-32\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})$

$c_5 = 30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4-120\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3-60\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3+180\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2+180\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+180\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+60\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2-120\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3-180\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2-180\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2-120\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})-6\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^5\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})+30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^4+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3+60\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3+60\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2+6\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^5\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-$

$b_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^3+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-96\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-40\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+96\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-96\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+96\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+40\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-6\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-42\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+60\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-96\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-96\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-$

$a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-$
$b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(d_{x1}\,d_{y2}-$
$d_{x2}\,d_{y1})+144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-$
$c_{y1}\,d_{x2})+144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-$
$c_{y1}\,d_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-$
$c_{y1}\,d_{x2})+84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-$
$c_{y1}\,d_{x2})-42\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(c_{x1}\,d_{y2}-$
$c_{y1}\,d_{x2})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+$
$60\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-4\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+4\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-36\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-72\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,c_{x1}-$
$a_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-$
$b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-$
$a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+96\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-$
$b_{y1}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y2}-$
$c_{y1}\,d_{x2})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-$
$c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+$
$36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+$
$16\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+36\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-36\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-$
$b_{y1}\,d_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-$
$b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-$
$b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,c_{y2}-$
$c_{x2}\,c_{y1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2-$
$12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+$
$6\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+12\,(a_{x1}\,a_{y2}-$
$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$
$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-$
$a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-$
$b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-6\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-$

$a_{y1}\,c_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^4\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-48\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-16\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^5\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3-4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2+4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-$

$a_{y2}\,b_{x2})-72\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-72\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-72\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-18\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^2+4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3-4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^2+12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2+10\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+24\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y2}-$

$$b_{y1}\,c_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,c_{y2}-$$
$$a_{y2}\,c_{x2})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+$$
$$36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-48\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-30\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-$$
$$b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-132\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-$$
$$b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-$$
$$a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+18\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+204\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-$$
$$b_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-$$
$$b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-$$
$$b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x2}\,c_{y2}-$$
$$b_{y2}\,c_{x2})-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+$$
$$6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^2+18\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+16\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x2}\,d_{y2}-$$
$$b_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-$$
$$b_{x2}\,d_{y1})-6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{x2}\,d_{y2}-$$
$$a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{y2}\,d_{x1}-$$
$$c_{x2}\,d_{y1})+16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+$$
$$12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-$$
$$4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{x2}\,b_{y2}-$$
$$a_{y2}\,b_{x2})-16\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+$$
$$36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+$$
$$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2+$$
$$6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2-6\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x2}\,c_{y2}-$$
$$b_{y2}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-$$
$$b_{y1}\,c_{x2})^3-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-$$
$$b_{x2}\,c_{y1})+4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+72\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-$$
$$a_{x2}\,d_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(b_{x2}\,c_{y2}-$$
$$b_{y2}\,c_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+$$
$$18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-12\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+24\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-$$
$$b_{y1}\,d_{x1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-24\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-$$
$$b_{x2}\,c_{y1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-$$
$$b_{y1}\,d_{x2})^2+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-$$
$$36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+$$
$$18\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-6\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-24\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-$$
$$b_{y1}\,c_{x2})^2-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+$$
$$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2+12\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})-18\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-8\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})^4\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-$$
$$b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y1}-$$
$$c_{y1}\,d_{x1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-$$
$$b_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+6\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-6\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x2}\,c_{y2}-$$
$$b_{y2}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{y2}\,d_{x1}-$$
$$b_{x2}\,d_{y1})-24\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-$$
$$b_{y1}\,d_{x1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+$$
$$72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-$$
$$b_{y1}\,c_{x2})-124\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+$$
$$20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+148\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$

$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-42\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+60\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})^2-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3-4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})^2-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})$

$c_6=15\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^4-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})-120\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3-20\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3+90\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2+360\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-$

$$a_{y1}\, d_{x2}) + 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2 + 60\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 90\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2 - 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3 - 360\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 - 120\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) - 60\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 - 180\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) - 30\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^4\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1}) + 15\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^4 + 120\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3 + 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 20\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3 + 90\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 30\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^4\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^6 + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 - 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^3\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^4\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})^2 + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 + 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^3 + 4\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^3\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^2\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2 + 3\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1})^2 + 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 + 21\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})^2 + 21\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2})^2 - 18\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x2}\, d_{y2} - a_{y2}\, d_{x2})^2 + 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 + 21\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})^2 - 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2 + 6\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2 + 21\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1})^2 + 3\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1})^2 + 6\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^2 + (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})^2 + 20\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2 - 24\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) - 20\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 18\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2 + 144\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) + 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 18\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2 - 144\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) - 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 20\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2 + 24\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) + 20\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{y2}\, c_{x1} -$$

$$a_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2+$$
$$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2+72\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-$$
$$b_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+$$
$$24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+$$
$$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+2\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-$$
$$a_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-$$
$$a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-20\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2+$$
$$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-36\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+288\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+48\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+120\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+20\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-432\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-56\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+42\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+288\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+120\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+20\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-$$
$$6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-32\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-$$
$$b_{x2}\,b_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-$$
$$b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-16\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y1}-$$
$$b_{y1}\,d_{x1})-24\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-$$
$$12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+$$
$$32\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+108\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-96\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,b_{y2}-$$

$a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1}) + 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 12 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 6 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 6 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1})^2 - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2})^2 - 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y2} - b_{y1} c_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) - 10 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (c_{x1} c_{y2} - c_{x2} c_{y1}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1})^2 + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (a_{x2} d_{y2} - a_{y2} d_{x2}) (b_{x1} c_{y1} - b_{y1} c_{x1})^2 + 48 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} d_{x1} - a_{x2} d_{y1}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{x2} d_{y2} - a_{y2} d_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 10 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{y2} c_{x1} - a_{x2} c_{y1})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) - 16 (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{x2} d_{y2} - a_{y2} d_{x2}) - 10 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{y2} c_{x1} - a_{x2} c_{y1})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) - 2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x2} c_{y2} - a_{y2} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 16 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (b_{x1} d_{y2} - b_{y1} d_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{y2} d_{x1} -$

$$a_{x2}\,d_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y2}-$$

$$b_{y1}\,c_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-24\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})^4\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+$$

$$4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^3+4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^4\,(b_{x1}\,c_{y1}-$$

$$b_{y1}\,c_{x1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2-$$

$$6\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-18\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})^2-14\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-$$

$$b_{y2}\,c_{x2})^2-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})^2-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-$$

$$a_{y1}\,b_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})^2+288\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$

$$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+2\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$

$$a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})^3\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$$

$$a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})^2+6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-$$

$$a_{x2}\,c_{y1})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+$$

$$72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-$$

$$b_{x2}\,d_{y1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})^2+$$

$$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})^2+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2-12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+$$

$$18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+36\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+2\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-$$

$$a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,d_{x1}-$$

$$a_{x2}\,d_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-$$

$$a_{x2}\,c_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x2}\,d_{y2}-$$

$$b_{y2}\,d_{x2})-24\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-$$

$$b_{y1}\,c_{x2})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-$$

$$b_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+6\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-$$

$b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-$
$b_{y1}\,c_{x1})^2-12\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2-$
$24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-24\,(a_{x1}\,b_{y2}-$
$a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-$
$a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$
$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$
$a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+36\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-$
$a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-36\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,d_{y1}-$
$b_{y1}\,d_{x1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+$
$2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-$
$a_{y1}\,c_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-$
$a_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{y2}\,d_{x1}-$
$b_{x2}\,d_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-$
$b_{x2}\,d_{y1})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-$
$b_{y1}\,d_{x2})-48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-$
$b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(c_{y2}\,d_{x1}-$
$c_{x2}\,d_{y1})-60\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-$
$b_{x2}\,b_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-$
$b_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-$
$84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-$
$b_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-$
$c_{x2}\,c_{y1})+8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+4\,(a_{x1}\,c_{y1}-$
$a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-$
$a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-8\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-$
$b_{y1}\,c_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-$
$b_{x2}\,c_{y1})+8\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+12\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-8\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^3-8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$
$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^3+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y2}-$
$b_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-$
$b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-$
$c_{x2}\,c_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,d_{y2}-$
$b_{y1}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+$
$24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+$
$24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2-12\,(a_{x1}\,b_{y1}-$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-$$
$$a_{y1}\,b_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x2}\,c_{y2}-$$
$$b_{y2}\,c_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2}-$$
$$b_{x2}\,b_{y1})^3+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,c_{y2}-$$
$$b_{y2}\,c_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-$$
$$b_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-12\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})^2-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-$$
$$a_{x2}\,b_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-$$
$$8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+2\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-$$
$$a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y2}-$$
$$b_{y1}\,d_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+$$
$$6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-6\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-$$
$$a_{y1}\,c_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,b_{y2}-$$
$$b_{x2}\,b_{y1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(c_{x2}\,d_{y2}-$$
$$c_{y2}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x2}\,d_{y2}-$$
$$c_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-$$
$$b_{x2}\,c_{y1})+4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-8\,(a_{x1}\,b_{y1}-$$
$$a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-$$
$$a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-$$
$$a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,d_{x1}-$$
$$b_{x2}\,d_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-$$
$$b_{y1}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-42\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-$$
$$a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+96\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-$$
$$b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-84\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-$$
$$b_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-$$
$$a_{y1}\,c_{x2})^2\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-$$
$$b_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-$$
$$b_{y1}\,c_{x1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-36\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-$$
$$a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-80\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-$$
$$b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(c_{x1}\,d_{y1}-$$
$$c_{y1}\,d_{x1})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-$$
$$c_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+$$
$$6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-$$
$$12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-12\,(a_{x1}\,a_{y2}-$$
$$a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-$$

$a_{y1}\, b_{x2}) \,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})^3 \,(c_{y2}\, d_{x1}-c_{x2}\, d_{y1})-12\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2})\,(b_{y2}\, d_{x1}-b_{x2}\, d_{y1})-12\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})\,(a_{y2}\, d_{x1}-a_{x2}\, d_{y1})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2})-8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{x2}\, b_{y2}-a_{y2}\, b_{x2})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2})\,(c_{x1}\, d_{y1}-c_{y1}\, d_{x1})-12\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})^2 \,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2})^2 - 8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})^2 \,(c_{x1}\, d_{y1}-c_{y1}\, d_{x1}) + 8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})^2 \,(c_{x1}\, d_{y2}-c_{y1}\, d_{x2}) + 12\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2})-10\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(a_{y2}\, c_{x1}-a_{x2}\, c_{y1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2}) + 8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(a_{x2}\, d_{y2}-a_{y2}\, d_{x2})\,(c_{x1}\, d_{y2}-c_{y1}\, d_{x2}) - 4\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(a_{x2}\, d_{y2}-a_{y2}\, d_{x2})\,(c_{x1}\, d_{y2}-c_{y1}\, d_{x2}) - 4\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(a_{y2}\, c_{x1}-a_{x2}\, c_{y1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2})-16\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{x2}\, b_{y2}-a_{y2}\, b_{x2})\,(b_{x1}\, d_{y1}-b_{y1}\, d_{x1})\,(c_{x1}\, c_{y2}-c_{x2}\, c_{y1})+40\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})^2 \,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2})^2 -72\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2}-a_{y1}\, c_{x2})^2 \,(c_{y2}\, d_{x1}-c_{x2}\, d_{y1})-40\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2})^2 +72\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2}-a_{y1}\, c_{x2})^2 \,(c_{y2}\, d_{x1}-c_{x2}\, d_{y1})-24\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{y2}\, d_{x1}-b_{x2}\, d_{y1})+72\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2}-a_{y1}\, c_{x2})^2 \,(c_{x2}\, d_{y2}-c_{y2}\, d_{x2})-48\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, d_{y1}-a_{y1}\, d_{x1})\,(a_{y2}\, c_{x1}-a_{x2}\, c_{y1})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2})+28\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{y2}\, c_{x1}-a_{x2}\, c_{y1})\,(a_{y2}\, d_{x1}-a_{x2}\, d_{y1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2})+24\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})\,(a_{x2}\, d_{y2}-a_{y2}\, d_{x2})\,(c_{x2}\, d_{y2}-c_{y2}\, d_{x2})+24\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2})\,(c_{x1}\, d_{y1}-c_{y1}\, d_{x1})-24\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x2}\, d_{y2}-b_{y2}\, d_{x2})+24\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2})\,(c_{x1}\, d_{y1}-c_{y1}\, d_{x1})-24\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(c_{x2}\, d_{y2}-c_{y2}\, d_{x2})-12\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})^2 \,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2}) + 12\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})^2 \,(a_{x2}\, c_{y2}-a_{y2}\, c_{x2})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1}) + 12\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x1}\, d_{y1}-b_{y1}\, d_{x1})-8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{y2}\, c_{x1}-b_{x2}\, c_{y1})\,(b_{x2}\, d_{y2}-b_{y2}\, d_{x2})-8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{y2}\, c_{x1}-b_{x2}\, c_{y1})\,(b_{y2}\, d_{x1}-b_{x2}\, d_{y1})-12\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})^2 \,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x1}\, d_{y1}-b_{y1}\, d_{x1})\,(b_{x1}\, d_{y2}-b_{y1}\, d_{x2})-6\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(d_{x1}\, d_{y2}-d_{x2}\, d_{y1})-10\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(a_{y2}\, c_{x1}-a_{x2}\, c_{y1})\,(d_{x1}\, d_{y2}-d_{x2}\, d_{y1})-8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(a_{y2}\, c_{x1}-a_{x2}\, c_{y1})\,(d_{x1}\, d_{y2}-d_{x2}\, d_{y1})+8\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^3 \,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(a_{y2}\, d_{x1}-a_{x2}\, d_{y1})\,(c_{x1}\, d_{y2}-c_{y1}\, d_{x2})-24\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x1}\, d_{y1}-b_{y1}\, d_{x1})+24\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{x1}\, d_{y1}-a_{y1}\, d_{x1})\,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2})\,(b_{y2}\, c_{x1}-b_{x2}\, c_{y1})-12\,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})^3 \,(a_{x1}\, c_{y2}-a_{y1}\, c_{x2})\,(a_{x1}\, d_{y1}-a_{y1}\, d_{x1})\,(a_{x2}\, b_{y2}-a_{y2}\, b_{x2})+28\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})^2 \,(a_{y2}\, b_{x1}-a_{x2}\, b_{y1})\,(b_{x1}\, d_{y1}-b_{y1}\, d_{x1})\,(c_{x1}\, d_{y1}-c_{y1}\, d_{x1})+48\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1}-a_{y1}\, b_{x1})\,(a_{x1}\, d_{y1}-a_{y1}\, d_{x1})\,(b_{x1}\, b_{y2}-b_{x2}\, b_{y1})\,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})\,(b_{x1}\, c_{y2}-b_{y1}\, c_{x2}) - 12\,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})^3 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})^2 \,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1}) + 12\,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})^3 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})^2 \,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})-12\,(a_{x1}\, b_{y2}-a_{y1}\, b_{x2})^3 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})^2 \,(b_{x1}\, c_{y1}-b_{y1}\, c_{x1})-12\,(a_{x1}\, a_{y2}-a_{x2}\, a_{y1})\,(a_{x1}\, c_{y1}-a_{y1}\, c_{x1})^3 \,(a_{x1}\, d_{y2}-a_{y1}\, d_{x2})\,(b_{x2}\, c_{y2}-$

$b_{y2}\,c_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})+35\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+56\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+40\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+42\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-14\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-28\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})^2-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+96\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+48\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+28\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(d_{x1}\,d_{y2}-d_{x2}\,d_{y1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2+48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2-48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(c_{x1}\,d_{y2}-$

$c_{y1}\, d_{x2}) + 72\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) - 36\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x2}\, c_{y2} - a_{y2}\, c_{x2})\, (b_{x2}\, d_{y2} - b_{y2}\, d_{x2}) - 72\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 72\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\, (b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) - 36\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x2}\, c_{y2} - a_{y2}\, c_{x2})\, (b_{y2}\, d_{x1} - b_{x2}\, d_{y1}) + 72\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x2}\, c_{y2} - a_{y2}\, c_{x2})\, (b_{y2}\, d_{x1} - b_{x2}\, d_{y1})$

$c_7 = -60\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3 - 60\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^3 + 180\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 180\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 180\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2 + 60\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2 - 180\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 - 180\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 - 360\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) - 30\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^4\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1}) - 120\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) - 60\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^3\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1}) + 60\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3 + 60\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3 + 180\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 30\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^4\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 60\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 60\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^3\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 6\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^5 - 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^2\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^2\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2 + 4\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^3\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) + 144\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) + 144\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 12\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 12\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 96\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 96\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 12\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 12\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 18\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 - 18\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 + 6\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 6\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 36\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + 36\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 18\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 - 18\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 - 6\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} -$

$a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) - 6 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 72 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 12 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 8 (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 72 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 84 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 56 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 96 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} d_{y1} - c_{y1} d_{x1}) + 84 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 56 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 96 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) - 16 (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 48 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} d_{y1} - b_{y1} d_{x1}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1})^2 - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 10 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2})^2 - 20 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 - 18 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y2} - b_{y1} c_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 30 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 + 36 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 84 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y1} - c_{y1} d_{x1}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 84 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} d_{y2} - c_{y1} d_{x2}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) + 84 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^4 (a_{y2} c_{x1} - a_{x2} c_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (b_{y2} c_{x1} - b_{x2} c_{y1}) + 10 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^4 (a_{y2} b_{x1} - a_{x2} b_{y1}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1}) + 48 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 20 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x2} c_{y2} - a_{y2} c_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (a_{x2} c_{y2} -$

$$a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2-2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-$$

$$b_{y1}\,c_{x1})^2-6\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^3+2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2-$$

$$6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2-4\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-$$

$$b_{x2}\,c_{y1})^2+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+6\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,c_{y1}-$$

$$b_{y1}\,c_{x1})^3-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-$$

$$24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2+$$

$$6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2-24\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2-18\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+30\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-$$

$$a_{x2}\,b_{y1})^2\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2}-$$

$$a_{y2}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x2}\,c_{y2}-$$

$$b_{y2}\,c_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-10\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-8\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-12\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+24\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-28\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2}-$$

$$a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-$$

$$b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x2}\,d_{y2}-$$

$$b_{y2}\,d_{x2})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-$$

$$b_{y1}\,c_{x1})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-$$

$$24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-$$

$$12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-8\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-$$

$$a_{x2}\,d_{y1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-$$

$$a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x2}\,c_{y2}-$$

$$b_{y2}\,c_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+14\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})^2+$$

$$12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})^2-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})^2\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-$$

$$a_{y2}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-6\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-$$

$$a_{y1}\,c_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,c_{y2}-$$

$$a_{y2}\,c_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+14\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})-$$

$12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x2} c_{y2} - a_{y2} c_{x2}) (a_{x2} d_{y2} - a_{y2} d_{x2}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x2} c_{y2} - a_{y2} c_{x2}) (a_{x2} d_{y2} - a_{y2} d_{x2}) - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{y2} d_{x1} - b_{x2} d_{y1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x2} b_{y2} - a_{y2} b_{x2}) (b_{y2} d_{x1} - b_{x2} d_{y1}) + 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} d_{x1} - a_{x2} d_{y1}) (a_{x2} c_{y2} - a_{y2} c_{x2}) + 42 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (b_{y2} d_{x1} - b_{x2} d_{y1})^2 + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} d_{x1} - a_{x2} d_{y1})^2 - 2 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) - 16 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (c_{x2} d_{y2} - c_{y2} d_{x2}) - 12 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) (c_{x2} d_{y2} - c_{y2} d_{x2}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 4 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) + 16 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x2} c_{y2} - b_{y2} c_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{x1} d_{y2} - b_{y1} d_{x2}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 10 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 20 (a_{x1} c_{y1} - a_{y1} c_{x1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (a_{y2} c_{x1} - a_{x2} c_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) - 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{x2} b_{y2} - a_{y2} b_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) - 36 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) - 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1})^2 - 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x2} d_{y2} - a_{y2} d_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 48 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{x2} b_{y2} - a_{y2} b_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) - 6 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 12 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) + 12 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 30 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{y2} d_{x1} - a_{x2} d_{y1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) - 30 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{y2} d_{x1} - b_{x2} d_{y1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 36 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{y2} d_{x1} - b_{x2} d_{y1}) + 48 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) + 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2}) (c_{y2} d_{x1} - c_{x2} d_{y1}) + 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (d_{x1} d_{y2} - d_{x2} d_{y1}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y1} -$

$b_{y1}\, d_{x1}) + 36\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{y2}\, d_{x1} - a_{x2}\, d_{y1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + $

$72\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, d_{y1} - $

$b_{y1}\, d_{x1}) + 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - $

$b_{y1}\, d_{x1}) + 36\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(a_{y2}\, d_{x1} - $

$a_{x2}\, d_{y1}) + 36\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})\,(c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) + $

$72\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{x1}\, d_{y1} - $

$b_{y1}\, d_{x1}) - 42\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 - $

$72\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{y2}\, d_{x1} - a_{x2}\, d_{y1})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1}) - $

$6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{y2}\, d_{x1} - a_{x2}\, d_{y1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) - $

$18\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) - 36\,(a_{x1}\, a_{y2} - $

$a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{x1}\, d_{y1} - $

$b_{y1}\, d_{x1}) - 12\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - $

$12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 30\,(a_{x1}\, a_{y2} - $

$a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1})^2 - 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - $

$a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1})\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) + 18\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - $

$a_{y1}\, c_{x2})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 30\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, d_{y2} - $

$a_{y1}\, d_{x2})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1})^2 - 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(b_{y2}\, c_{x1} - $

$b_{x2}\, c_{y1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 18\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\,(c_{x1}\, d_{y2} - $

$c_{y1}\, d_{x2}) + 30\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})^2 - $

$60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + $

$18\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 12\,(a_{x1}\, b_{y1} - $

$a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - $

$a_{y1}\, b_{x1})^2\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 4\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(b_{x1}\, c_{y1} - $

$b_{y1}\, c_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) - 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(b_{x1}\, c_{y2} - $

$b_{y1}\, c_{x2})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 18\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2} - $

$a_{y1}\, c_{x2})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - $

$a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) + 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - $

$a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 24\,(a_{x1}\, a_{y2} - $

$a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\,(b_{x1}\, c_{y2} - $

$b_{y1}\, c_{x2}) - 24\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{y2}\, b_{x1} - $

$a_{x2}\, b_{y1})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) - 24\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, d_{y1} - $

$a_{y1}\, d_{x1})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) + 6\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x2}\, b_{y2} - $

$a_{y2}\, b_{x2}) - 12\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x2}\, c_{y2} - a_{y2}\, c_{x2}) + $

$12\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{x2}\, b_{y2} - a_{y2}\, b_{x2}) + 18\,(a_{x1}\, b_{y2} - $

$a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) + 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y1} - $

$a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{x2}\, c_{y2} - a_{y2}\, c_{x2}) + 18\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, c_{y2} - $

$a_{y1}\, c_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) - 12\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y1} - $

$a_{y1}\, d_{x1})\,(a_{x2}\, b_{y2} - a_{y2}\, b_{x2}) - 18\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{y2}\, c_{x1} - $

$a_{x2}\, c_{y1}) - 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x2}\, c_{y2} - a_{y2}\, c_{x2}) - $

$18\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) - $

$32\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 24\,(a_{x1}\, a_{y2} - $

$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+72\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-216\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-72\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+24\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+36\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-$$

$$a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1}-$$

$$a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(c_{x1}\,c_{y2}-$$

$$c_{x2}\,c_{y1})+72\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-$$

$$b_{x2}\,b_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-$$

$$b_{x2}\,c_{y1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})+144\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})+108\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,c_{x1}-$$

$$a_{x2}\,c_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,c_{x1}-$$

$$a_{x2}\,c_{y1})-72\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-$$

$$a_{x2}\,b_{y1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-$$

$$a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,c_{x1}-$$

$$a_{x2}\,c_{y1})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x2}\,b_{y2}-$$

$$a_{y2}\,b_{x2})+72\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})+$$

$$72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})-$$

$$24\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-72\,(a_{x1}\,b_{y1}-$$

$$a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-144\,(a_{x1}\,a_{y2}-$$

$$a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{y2}\,d_{x1}-$$

$$c_{x2}\,d_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x1}\,d_{y1}-$$

$$c_{y1}\,d_{x1})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1}-$$

$$a_{x2}\,d_{y1})-144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(d_{x1}\,d_{y2}-$$

$$d_{x2}\,d_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1}-$$

$$b_{y1}\,d_{x1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-$$

$$c_{y1}\,d_{x1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y1}-$$

$$c_{y1}\,d_{x1})$$

$$c_8 = -60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^3+180\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-$$

$$a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+90\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-$$

$$a_{y1}\,d_{x1})^2+180\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2+$$

$$15\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^4\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2-180\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-$$

$$a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2-180\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-$$

$a_{y1}\, d_{x2}) - 360\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) - 120\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^3\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1}) - 30\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^4\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) - 60\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1}) + 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^3 + 90\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 180\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 120\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^3\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^5 + 15\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^4\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2 + 60\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 15\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^4 - 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2 + 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^2\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) + (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^4 + 21\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1})^2 + 3\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})^2 + 6\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1})^2 + 6\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2 + 144\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(d_{x1}\, d_{y2} - d_{x2}\, d_{y1}) - 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 96\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\,(a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, d_{y1} - a_{y1}\, d_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 18\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2})^2 + 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 36\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 18\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1})^2 - 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 36\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 6\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) + 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 36\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 96\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 48\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) + 96\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 48\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) - 48\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - 60\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\,(a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - 24\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 10\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) - 12\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 2\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\,(b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 24\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 10\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\,(b_{x1}\, b_{y2} - b_{x2}\, b_{y1})\,(b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) - 12\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\,(b_{x1}\, c_{y1} - b_{y1}\, c_{x1})\,(b_{x1}\, c_{y2} - b_{y1}\, c_{x2})^2 - 36\,(a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\,(a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\,(a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\,(b_{x1}\, c_{y2} -$

$$b_{y1}\,c_{x2})^2 - 20\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^2 - 36\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})^2 - 84\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^4\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 84\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^4\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 10\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) + 8\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) + 40\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1}) - 12\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) - 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 84\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) + 48\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) + 16\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2}) + 10\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 20\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{y2}\,d_{x1} - b_{x2}\,d_{y1}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2}) - 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^2 - 6\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2}) + 4\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})^3 - 4\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1}) + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})^2\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) + 12\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) + 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})^2\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2 - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2 - 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{x2}\,d_{y2} - b_{y2}\,d_{x2}) - 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1}) - 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(a_{x2}\,d_{y2} - a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1}) - 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1}) + 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{y2}\,d_{x1} - b_{x2}\,d_{y1}) - 36\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) - 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1})\,(b_{x2}\,c_{y2} - b_{y2}\,c_{x2}) - 12\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) + 18\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) - 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 8\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) + 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 16\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2})\,(a_{x2}\,d_{y2} - a_{y2}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,d_{x1} -$$

$a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})^2+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+14\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^4\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})^2+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})^2-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})^2-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+20\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{y2}\,d_{x1}-c_{x2}\,d_{y1})+48\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+36\,(a_{x1}\,a_{y2}-$

$a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^2-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+30\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})-2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^3-2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})+18\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+144\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})+72\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+144\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-$

$$a_{y1} b_{x2}) (a_{x1} d_{y2}-a_{y1} d_{x2})^2 (a_{y2} c_{x1}-a_{x2} c_{y1})-72 (a_{x1} b_{y2}-a_{y1} b_{x2})^2 (a_{x1} c_{y1}-a_{y1} c_{x1}) (a_{x1} c_{y2}-$$
$$a_{y1} c_{x2}) (a_{x1} d_{y1}-a_{y1} d_{x1}) (a_{y2} b_{x1}-a_{x2} b_{y1})-144 (a_{x1} a_{y2}-a_{x2} a_{y1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y1}-$$
$$a_{y1} c_{x1}) (a_{x1} d_{y1}-a_{y1} d_{x1}) (a_{x1} d_{y2}-a_{y1} d_{x2}) (a_{y2} b_{x1}-a_{x2} b_{y1})+72 (a_{x1} a_{y2}-a_{x2} a_{y1}) (a_{x1} b_{y2}-$$
$$a_{y1} b_{x2}) (a_{x1} c_{y1}-a_{y1} c_{x1}) (a_{x1} d_{y1}-a_{y1} d_{x1})^2 (a_{y2} b_{x1}-a_{x2} b_{y1})-144 (a_{x1} a_{y2}-a_{x2} a_{y1}) (a_{x1} b_{y1}-$$
$$a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y1}-a_{y1} c_{x1}) (a_{x1} c_{y2}-a_{y1} c_{x2}) (b_{y2} d_{x1}-b_{x2} d_{y1})-72 (a_{x1} a_{y2}-$$
$$a_{x2} a_{y1}) (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2})^2 (a_{x1} c_{y2}-a_{y1} c_{x2}) (c_{x1} d_{y1}-c_{y1} d_{x1})-72 (a_{x1} a_{y2}-$$
$$a_{x2} a_{y1}) (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} c_{y1}-a_{y1} c_{x1}) (a_{x1} c_{y2}-a_{y1} c_{x2})^2 (a_{y2} d_{x1}-a_{x2} d_{y1})-144 (a_{x1} a_{y2}-$$
$$a_{x2} a_{y1})^2 (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y1}-a_{y1} c_{x1}) (d_{x1} d_{y2}-d_{x2} d_{y1})-72 (a_{x1} a_{y2}-$$
$$a_{x2} a_{y1})^2 (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y1}-a_{y1} c_{x1}) (a_{x1} d_{y2}-a_{y1} d_{x2}) (b_{x1} d_{y1}-b_{y1} d_{x1})+72 (a_{x1} a_{y2}-$$
$$a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (c_{x1} d_{y1} - c_{y1} d_{x1})$$

$$c_9 = -20 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} d_{y1}-a_{y1} d_{x1})^3+60 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} d_{y1}-a_{y1} d_{x1})^2 (a_{x1} d_{y2}-$$
$$a_{y1} d_{x2}) + 180 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 +$$
$$60 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} d_{y1} - a_{y1} d_{x1})^2-60 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} d_{y1}-$$
$$a_{y1} d_{x1}) (a_{x1} d_{y2}-a_{y1} d_{x2})^2-360 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y2}-a_{y1} c_{x2}) (a_{x1} d_{y1}-$$
$$a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) - 60 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) -$$
$$120 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2})-180 (a_{x1} a_{y2}-$$
$$a_{x2} a_{y1}) (a_{x1} b_{y2}-a_{y1} b_{x2})^2 (a_{x1} c_{y2}-a_{y1} c_{x2})^2 (a_{x1} d_{y1}-a_{y1} d_{x1})-30 (a_{x1} b_{y2}-a_{y1} b_{x2})^4 (a_{x1} c_{y2}-$$
$$a_{y1} c_{x2}) (a_{x1} d_{y1}-a_{y1} d_{x1})+20 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} d_{y2}-a_{y1} d_{x2})^3+180 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y2}-$$
$$a_{y1} b_{x2}) (a_{x1} c_{y2}-a_{y1} c_{x2}) (a_{x1} d_{y2}-a_{y1} d_{x2})^2+60 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} c_{y2}-a_{y1} c_{x2})^3 (a_{x1} d_{y2}-$$
$$a_{y1} d_{x2})+60 (a_{x1} a_{y2}-a_{x2} a_{y1}) (a_{x1} b_{y2}-a_{y1} b_{x2})^3 (a_{x1} d_{y2}-a_{y1} d_{x2})^2+180 (a_{x1} a_{y2}-a_{x2} a_{y1}) (a_{x1} b_{y2}-$$
$$a_{y1} b_{x2})^2 (a_{x1} c_{y2}-a_{y1} c_{x2})^2 (a_{x1} d_{y2}-a_{y1} d_{x2})+30 (a_{x1} a_{y2}-a_{x2} a_{y1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y2}-$$
$$a_{y1} c_{x2})^4+30 (a_{x1} b_{y2}-a_{y1} b_{x2})^4 (a_{x1} c_{y2}-a_{y1} c_{x2}) (a_{x1} d_{y2}-a_{y1} d_{x2})+20 (a_{x1} b_{y2}-a_{y1} b_{x2})^3 (a_{x1} c_{y2}-$$
$$a_{y1} c_{x2})^3-4 (a_{x1} b_{y1}-a_{y1} b_{x1})^2 (a_{y2} b_{x1}-a_{x2} b_{y1})^3 (b_{x1} d_{y1}-b_{y1} d_{x1})+4 (a_{x1} b_{y1}-a_{y1} b_{x1})^2 (a_{y2} b_{x1}-$$
$$a_{x2} b_{y1})^3 (b_{x1} d_{y2}-b_{y1} d_{x2})+12 (a_{x1} b_{y1}-a_{y1} b_{x1})^2 (a_{y2} b_{x1}-a_{x2} b_{y1})^2 (b_{x1} b_{y2}-b_{x2} b_{y1}) (b_{x1} c_{y2}-$$
$$b_{y1} c_{x2})+4 (a_{x1} b_{y1}-a_{y1} b_{x1})^2 (a_{y2} b_{x1}-a_{x2} b_{y1}) (b_{x1} b_{y2}-b_{x2} b_{y1})^3-4 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} d_{y2}-$$
$$a_{y1} d_{x2})^2 (b_{x1} c_{y1}-b_{y1} c_{x1})+8 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} d_{y1}-a_{y1} d_{x1}) (a_{x1} d_{y2}-a_{y1} d_{x2}) (b_{x1} c_{y1}-$$
$$b_{y1} c_{x1})-4 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} d_{y1}-a_{y1} d_{x1})^2 (b_{x1} c_{y1}-b_{y1} c_{x1})-20 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} b_{y1}-$$
$$a_{y1} b_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2})^2 + 8 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} d_{y2} - c_{y1} d_{x2}) +$$
$$12 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} b_{y1} - a_{y1} b_{x1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 20 (a_{x1} a_{y2} -$$
$$a_{x2} a_{y1})^3 (a_{x1} b_{y1}-a_{y1} b_{x1}) (b_{x1} d_{y1}-b_{y1} d_{x1})^2-8 (a_{x1} a_{y2}-a_{x2} a_{y1})^3 (a_{x1} c_{y1}-a_{y1} c_{x1})^2 (c_{x1} d_{y1}-$$
$$c_{y1} d_{x1})+36 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (b_{x1} c_{y2}-b_{y1} c_{x2}) (b_{x1} d_{y1}-$$
$$b_{y1} d_{x1}) + 6 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (c_{x1} c_{y2} - c_{x2} c_{y1}) -$$
$$36 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (b_{x1} c_{y2}-b_{y1} c_{x2}) (b_{x1} d_{y2}-b_{y1} d_{x2})-$$
$$96 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y2}-a_{y1} c_{x2}) (c_{x1} d_{y1}-c_{y1} d_{x1})+$$
$$96 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y2}-a_{y1} c_{x2}) (c_{x1} d_{y2}-c_{y1} d_{x2})-$$
$$48 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y2}-a_{y1} b_{x2}) (a_{x1} c_{y1}-a_{y1} c_{x1}) (a_{x1} c_{y2}-a_{y1} c_{x2}) (b_{x1} d_{y1}-b_{y1} d_{x1})+$$
$$36 (a_{x1} a_{y2}-a_{x2} a_{y1}) (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2})^2 (b_{x1} b_{y2}-b_{x2} b_{y1}) (b_{x1} d_{y1}-b_{y1} d_{x1})+$$
$$8 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 36 (a_{x1} a_{y2} -$$
$$a_{x2} a_{y1}) (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2})^2 (b_{x1} b_{y2}-b_{x2} b_{y1}) (b_{x1} d_{y2}-b_{y1} d_{x2})-18 (a_{x1} a_{y2}-$$
$$a_{x2} a_{y1}) (a_{x1} b_{y1}-a_{y1} b_{x1}) (a_{x1} b_{y2}-a_{y1} b_{x2})^2 (b_{x1} c_{y2}-b_{y1} c_{x2})^2-20 (a_{x1} a_{y2}-a_{x2} a_{y1})^2 (a_{x1} b_{y1}-$$

$a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-56\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+56\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-16\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y1}-c_{y1}\,d_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})-20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+84\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^4\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-10\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})^2+10\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})+2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^3-8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^3-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})^2+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-$

$a_{y1}\,b_{x1})^3\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x2}\,d_{y2}-b_{y2}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})+14\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})^2+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})^2-24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})^2-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(c_{x2}\,d_{y2}-c_{y2}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+24\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+16\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})-12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+12\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+36\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})\,(b_{y2}\,d_{x1}-b_{x2}\,d_{y1})+72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+28\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+30\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})+4\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+18\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-$

$b_{y1}\,d_{x1}) + 6\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 18\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) + 6\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2}) + 18\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) - 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1} - b_{y1}\,c_{x1}) - 32\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) + 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y2} - b_{y1}\,d_{x2}) - 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,d_{y2} - c_{y1}\,d_{x2}) - 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(c_{x1}\,c_{y2} - c_{x2}\,c_{y1}) + 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x2}\,c_{y2} - b_{y2}\,c_{x2}) + 144\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1} - b_{x2}\,c_{y1}) - 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) + 60\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1}) + 72\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2}) - 72\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x2}\,c_{y2} - a_{y2}\,c_{x2}) + 96\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1}) + 72\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{x2}\,b_{y2} - a_{y2}\,b_{x2}) + 144\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1}) + 36\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) - 24\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) + 36\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2\,(a_{y2}\,c_{x1} - a_{x2}\,c_{y1}) - 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(b_{y2}\,d_{x1} - b_{x2}\,d_{y1}) - 144\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{y2}\,d_{x1} - a_{x2}\,d_{y1}) - 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) - 48\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1}) - 72\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(a_{y2}\,d_{x1} - a_{x2}\,d_{y1}) - 48\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})\,(c_{x1}\,d_{y1} - c_{y1}\,d_{x1}) + 24\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1} - a_{y1}\,c_{x1})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(b_{x1}\,d_{y1} - b_{y1}\,d_{x1})$

$c_{10} = 60\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2 + 90\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})^2 + 4\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^3\,(b_{x1}\,c_{y2} - b_{y1}\,c_{x2}) - 6\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^5\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1}) + 6\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^5\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) + 6\,(a_{x1}\,b_{y1} - a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1} - a_{x2}\,b_{y1})^2\,(b_{x1}\,b_{y2} - b_{x2}\,b_{y1})^2 + 15\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^4 + 15\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^4\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^2 + 60\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2 + 60\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})^3 + 90\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2})^2 - 120\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) - 120\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1}) + 120\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y2} - a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) - 180\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2} - a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1} - a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2} - a_{y1}\,d_{x2}) - 180\,(a_{x1}\,a_{y2} - a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2} -$

$$a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1}) + 180\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2}) + 3\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (a_{x2}\, b_{y2} - a_{y2}\, b_{x2})^2 +$$

$$24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^3\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) + 24\, (a_{x1}\, a_{y2} -$$

$$a_{x2}\, a_{y1})^3\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (c_{x1}\, d_{y2} - c_{y1}\, d_{x2}) + 24\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) + 72\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1}) + 24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})^3\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 32\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{x1}\, c_{y1} -$$

$$b_{y1}\, c_{x1}) + 72\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (b_{x1}\, b_{y2} -$$

$$b_{x2}\, b_{y1}) - 32\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) -$$

$$36\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (c_{x1}\, d_{y1} - c_{y1}\, d_{x1}) - 48\, (a_{x1}\, a_{y2} -$$

$$a_{x2}\, a_{y1})^3\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) + 72\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} -$$

$$a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{x2}\, b_{y2} - a_{y2}\, b_{x2}) - 24\, (a_{x1}\, a_{y2} -$$

$$a_{x2}\, a_{y1})^3\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (c_{y2}\, d_{x1} - c_{x2}\, d_{y1}) - 60\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) - 72\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (a_{y2}\, c_{x1} - a_{x2}\, c_{y1}) - 144\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})\, (a_{x1}\, d_{y1} - a_{y1}\, d_{x1})\, (b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 8\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^3\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x1}\, d_{y1} -$$

$$a_{y1}\, d_{x1})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 36\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (b_{x1}\, d_{y2} -$$

$$b_{y1}\, d_{x2}) - 6\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x2}\, b_{y2} - a_{y2}\, b_{x2}) -$$

$$72\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (a_{x2}\, b_{y2} -$$

$$a_{y2}\, b_{x2}) + 12\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) +$$

$$24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 8\, (a_{x1}\, a_{y2} -$$

$$a_{x2}\, a_{y1})^3\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^2\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) + 144\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})\, (a_{x1}\, d_{y2} - a_{y1}\, d_{x2})\, (b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) - 6\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})^3\, (a_{x2}\, c_{y2} -$$

$$a_{y2}\, c_{x2}) + 36\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (b_{x1}\, b_{y2} - b_{x2}\, b_{y1}) -$$

$$2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\, (b_{x1}\, b_{y2} - b_{x2}\, b_{y1})^2 - 72\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} -$$

$$a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{x2}\, c_{y2} - a_{y2}\, c_{x2}) + 2\, (a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})^5\, (b_{x1}\, c_{y1} - b_{y1}\, c_{x1}) + 24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})^2\, (b_{x1}\, c_{y1} -$$

$$b_{y1}\, c_{x1}) + 6\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^4\, (b_{y2}\, c_{x1} - b_{x2}\, c_{y1}) + 144\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} -$$

$$a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 8\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^3\, (a_{y2}\, b_{x1} -$$

$$a_{x2}\, b_{y1})\, (a_{y2}\, c_{x1} - a_{x2}\, c_{y1})\, (a_{x2}\, c_{y2} - a_{y2}\, c_{x2}) - 8\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y1} - a_{y1}\, c_{x1})\, (a_{x1}\, c_{y2} -$$

$$a_{y1}\, c_{x2})\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^3 - 16\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^3\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2})\, (b_{x1}\, d_{y2} -$$

$$b_{y1}\, d_{x2}) + 24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x2}\, d_{y2} - a_{y2}\, d_{x2})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) -$$

$$24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{x1}\, d_{y2} - b_{y1}\, d_{x2}) -$$

$$16\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^3\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) - 12\, (a_{x1}\, a_{y2} -$$

$$a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^3\, (a_{x2}\, c_{y2} - a_{y2}\, c_{x2})\, (a_{x2}\, d_{y2} - a_{y2}\, d_{x2}) + 24\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{x1}\, b_{y2} -$$

$$a_{y1}\, b_{x2})^2\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{x2}\, c_{y2} - b_{y2}\, c_{x2}) + 16\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^3\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (b_{x1}\, c_{y2} -$$

$$b_{y1}\, c_{x2})\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) - 24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})^2\, (b_{x1}\, b_{y2} -$$

$$b_{x2}\, b_{y1})\, (b_{x1}\, c_{y2} - b_{y1}\, c_{x2}) + 24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{y2}\, d_{x1} - a_{x2}\, d_{y1})\, (b_{x1}\, c_{y2} -$$

$$b_{y1}\, c_{x2}) + 12\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^3\, (a_{x1}\, b_{y2} - a_{y1}\, b_{x2})\, (a_{x2}\, b_{y2} - a_{y2}\, b_{x2})\, (b_{x2}\, c_{y2} - b_{y2}\, c_{x2}) +$$

$$24\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})^2\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})\, (a_{x1}\, c_{y2} - a_{y1}\, c_{x2})\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})\, (b_{x1}\, d_{y1} - b_{y1}\, d_{x1}) -$$

$$16\, (a_{x1}\, a_{y2} - a_{x2}\, a_{y1})\, (a_{x1}\, b_{y1} - a_{y1}\, b_{x1})^2\, (a_{y2}\, b_{x1} - a_{x2}\, b_{y1})^2\, (c_{x1}\, c_{y2} - c_{x2}\, c_{y1}) - 12\, (a_{x1}\, a_{y2} -$$

$a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{y2} d_{x1} - a_{x2} d_{y1}) (a_{x2} c_{y2} - a_{y2} c_{x2}) + 6 (a_{x1} b_{y1} - a_{y1} c_{x1}) (a_{y2} b_{x1} - a_{x2} b_{y1})^2 (a_{x2} c_{y2} - a_{y2} c_{x2}) + 24 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} d_{x1} - a_{x2} d_{y1}) (a_{x2} b_{y2} - a_{y2} b_{x2}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x2} b_{y2} - a_{y2} b_{x2}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 12 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (a_{y2} d_{x1} - a_{x2} d_{y1}) + 12 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x2} d_{y2} - b_{y2} d_{x2}) + 6 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 - 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1})^2 + 36 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} d_{y1} - b_{y1} d_{x1}) - 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) + 18 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} b_{x1} - a_{x2} b_{y1})^2 - 18 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 - 10 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x2} b_{y2} - a_{y2} b_{x2})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x2} c_{y2} - a_{y2} c_{x2}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 18 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1})^2 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 12 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (b_{x1} c_{y2} - b_{y1} c_{x2}) (b_{x2} c_{y2} - b_{y2} c_{x2}) - 18 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1})^2 - 6 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1})^2 - 12 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) - 36 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) - 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^3 (a_{x2} b_{y2} - a_{y2} b_{x2})^2 (b_{x1} c_{y1} - b_{y1} c_{x1}) - 18 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (b_{x1} c_{y2} - b_{y1} c_{x2})^2 + 6 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (b_{x1} b_{y2} - b_{x2} b_{y1})^2 - 8 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) - 6 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (b_{x1} c_{y1} - b_{y1} c_{x1})^2 + 12 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1}) (b_{x1} c_{y2} - b_{y1} c_{x2}) + 6 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y1} - a_{y1} c_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1})^2 + 18 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{y2} c_{x1} - a_{x2} c_{y1})^2 + 42 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{y2} c_{x1} - a_{x2} c_{y1}) (b_{y2} c_{x1} - b_{x2} c_{y1}) + 6 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} c_{x1} - a_{x2} c_{y1}) (c_{x1} c_{y2} - c_{x2} c_{y1})$

$c_{11} = 60 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1})^2 - 120 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{x1} d_{y2} - a_{y1} d_{x2}) + 4 (a_{x1} b_{y1} - a_{y1} b_{x1})^2 (a_{y2} b_{x1} - a_{x2} b_{y1})^3 (b_{x1} b_{y2} - b_{x2} b_{y1}) + 6 (a_{x1} b_{y2} - a_{y1} b_{x2})^5 (a_{x1} c_{y2} - a_{y1} c_{x2}) - 30 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^4 (a_{x1} d_{y1} - a_{y1} d_{x1}) + 30 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^4 (a_{x1} d_{y2} - a_{y1} d_{x2}) - 60 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y1} - a_{y1} d_{x1}) + 60 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2})^2 + 60 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 (a_{x1} d_{y2} - a_{y1} d_{x2}) + 60 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y2} - a_{y1} c_{x2})^3 + 60 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (a_{x1} c_{y2} - a_{y1} c_{x2})^2 - 180 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) + 180 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y2} - a_{y1} b_{x2})^2 (a_{x1} c_{y2} - a_{y1} c_{x2}) (a_{x1} d_{y2} - a_{y1} d_{x2}) + 6 (a_{x1} b_{y2} - a_{y1} b_{x2})^4 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{y2} b_{x1} - a_{x2} b_{y1}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} c_{y1} - a_{y1} c_{x1}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} b_{y2} - b_{x2} b_{y1}) + 4 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^4 (b_{x1} c_{y1} - b_{y1} c_{x1}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (c_{x1} d_{y1} - c_{y1} d_{x1}) + 24 (a_{x1} a_{y2} - a_{x2} a_{y1}) (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2})^3 (b_{y2} c_{x1} - b_{x2} c_{y1}) - 24 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (b_{x1} c_{y1} - b_{y1} c_{x1}) + 40 (a_{x1} a_{y2} - a_{x2} a_{y1})^3 (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} c_{y1} - a_{y1} c_{x1}) (b_{x1} d_{y2} - b_{y1} d_{x2}) - 72 (a_{x1} a_{y2} - a_{x2} a_{y1})^2 (a_{x1} b_{y1} - a_{y1} b_{x1}) (a_{x1} b_{y2} - a_{y1} b_{x2}) (a_{x1} d_{y1} - a_{y1} d_{x1}) (a_{y2} c_{x1} - a_{x2} c_{y1}) +$

$24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+56\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(c_{x1}\,d_{y2}-c_{y1}\,d_{x2})+2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})+144\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-8\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^3+16\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-16\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})^2-16\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})+6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})+4\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x2}\,c_{y2}-b_{y2}\,c_{x2})-10\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2-6\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2-8\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-36\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2+18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})$

$c_{12}=15\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})^2-30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^6+(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^4+15\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})^2+20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^3+30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^4\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+90\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2-120\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})+120\,(a_{x1}\,a_{y2}-$

$a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+3\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2+20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,d_{x1}-a_{x2}\,d_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+40\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{y2}\,c_{x1}-b_{x2}\,c_{y1})+56\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(c_{x1}\,c_{y2}-c_{x2}\,c_{y1})-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-72\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,d_{y2}-a_{y2}\,d_{x2})-10\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y2}-b_{y1}\,d_{x2})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2-2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,d_{y1}-b_{y1}\,d_{x1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})-2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-16\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-3\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})^2+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})^2-24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})-12\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^3\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})$

$c_{13}=-30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})-60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y1}-a_{y1}\,d_{x1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^5+30\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{x1}\,d_{y2}-a_{y1}\,d_{x2})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})^2+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^3\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})+4\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+20\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(b_{x1}\,c_{y1}-b_{y1}\,c_{x1})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^4\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})+60\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})^2\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,c_{y2}-a_{y1}\,c_{x2})\,(a_{y2}\,c_{x1}-a_{x2}\,c_{y1})+24\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{x1}\,c_{y1}-a_{y1}\,c_{x1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-2\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})^2+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,c_{y2}-a_{y2}\,c_{x2})+6\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})^2\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(a_{x2}\,b_{y2}-a_{y2}\,b_{x2})-10\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^3\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,c_{y2}-b_{y1}\,c_{x2})-18\,(a_{x1}\,a_{y2}-a_{x2}\,a_{y1})^2\,(a_{x1}\,b_{y1}-a_{y1}\,b_{x1})\,(a_{x1}\,b_{y2}-a_{y1}\,b_{x2})\,(a_{y2}\,b_{x1}-a_{x2}\,b_{y1})\,(b_{x1}\,b_{y2}-b_{x2}\,b_{y1})$

$$c_{14} = -30 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right) + 30 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) + 15 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right)^2 + 15 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^2 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^4 + 60 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^3 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) + 6 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} c_{y1} - a_{y1} c_{x1}\right) \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right) + 4 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(b_{x1} c_{y1} - b_{y1} c_{x1}\right) + 24 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^3 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{y2} c_{x1} - a_{x2} c_{y1}\right) + 6 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^2 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right)^2 \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right) \left(a_{x2} b_{y2} - a_{y2} b_{x2}\right) - 10 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^3 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right) \left(b_{x1} b_{y2} - b_{x2} b_{y1}\right)$$

$$c_{15} = -6 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^5 \left(a_{x1} d_{y1} - a_{y1} d_{x1}\right) + 6 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^5 \left(a_{x1} d_{y2} - a_{y1} d_{x2}\right) + 20 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^3 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^3 + 30 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right) \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) + 2 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^5 \left(b_{x1} c_{y1} - b_{y1} c_{x1}\right) - 2 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^3 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{y2} b_{x1} - a_{x2} b_{y1}\right)^2 + 6 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} b_{y1} - a_{y1} b_{x1}\right) \left(a_{y2} c_{x1} - a_{x2} c_{y1}\right)$$

$$c_{16} = 6 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^5 \left(a_{x1} c_{y2} - a_{y1} c_{x2}\right) + 15 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^4 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)^2$$

$$c_{17} = 6 \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^5 \left(a_{x1} b_{y2} - a_{y1} b_{x2}\right)$$

$$c_{18} = \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^6$$

$$c_{18} = \left(a_{x1} a_{y2} - a_{x2} a_{y1}\right)^6$$

5   Analysis

The previous sections outlined the math involved in determining the polynomial equation used to identify where two cubic parametric curves intersect. This section discusses that derivation and its implications.

The original intention of this project was to find a fast/simple method to identify where curves intersected. This project failed in this respect, because the result is very impractical. There are much faster ways to numerically approximate where two curves intersect than to resolve such a complex polynomial with potentially huge exponents. Also large exponents can lead to significant machine error when cast into IEEE double precision. Or alternatively: performance degrades sharply if we use classes like the BigDecimal to maintain several significant digits.

Meanwhile one of the peculiar successes of this project was identifying the fractional cubic root elimination transform. Maybe this is well-known to some readers, but it was a novel discovery for me when I first stumbled across it. It's trivial to apply a similar trick to square roots, and so it follows that if you apply it twice consecutively you can resolve quartic roots. Also you could combine this cubic root transform with a square root transform to resolve sextic roots. You could even combine two cubic transforms to make a (very hairy) transform for 9th degree roots. This raises the question: if we can transform 9th degree roots, what about simpler cases like 5th degree or 7th degree roots? Are they impossible because they are relatively prime, or are they just very hard to identify? If I were to continue investing time and energy in this direction: I would love to try to numerically (in a brute-force approach) explore this question.

This paper omits how exactly I factored this equation into the coefficients listed in the previous section. The reason for this omission is: I can't find my notes on this subject. (I actually completed this project a few years ago, and this writeup is long overdue.) So I wrote down what the factored coefficients are, and I confirmed that these figures are correct for this paper–but I don't know exactly how to derive them. But one thing that immediately jumps out at me is: this looks like the result of a matrix transformation. I wonder if I invested more time in factoring this if I would find an even simpler expression? One that either involves matrices or squaring a 9th degree polynomial?

There is also the sticky question: why, philosophically, should this be an 18th degree polynomial? (That is: why so many roots?) For comparison: if you study the intersection of two quadratic parametric curves you'll get a 4th degree polynomial. 4 roots makes sense, because if you imagine two curves (one shaped like the letter C and a copy of that shape rotated 90 degrees), then it's easy to see where they intersect in 4 places. But should two cubic curves have 18 intersections? I initially justified the 18th degree away because we could graphically identify up to 9 solutions, but the polynomial has to have an even degree

to account for the possibility of zero solutions. (So what is the smallest multiple of 9 that is even? 18.) But now I believe that explanation is inadequate. Instead if you look at how the equations unravelled mathematically: I think the solution to two n-degree curves is going to be $n * (n!)$. So 1 maps to 1, 2 maps to 4, 3 maps to 18, and 4 will map to 96. But this question might be better understood if there are more complete ways to factor this particular equation. If this equation is, for example, two 9th-degree equations multiplied together, then that raises a whole new set of fascinating questions and may simplify how to identify roots.

Considering how this equation was derived, it is not surprising that this equation cannot identify t values where a cubic parametric curve intersects itself. If we set $a_{x2} = a_{x1}$, $b_{x2} = b_{x1}$, $c_{x2} = c_{x1}$, etc then the resulting equation is simply zero. But what did surprise me is the realization that every cluster of variables contains an a term that cannot be factored out. For some reason I instinctively (and mistakenly) expected to be able to set all the a terms to zero and end up with a quadratic-quadratic solution.

This project did not yield the desired results, but I still wanted to share them in case someone finds it useful or insightful. The computer program (including the source code) used to write sections 3 and 4 is available here:

https://javagraphics.java.net/jars/CubicPaper.jar