

Zadania programowania liniowego

zminimalizuj (zmaksymalizuj):

$$f = Ax + By + Cz + \dots$$

przy ograniczeniach:

$$ax + by + cz + \dots \leq d$$

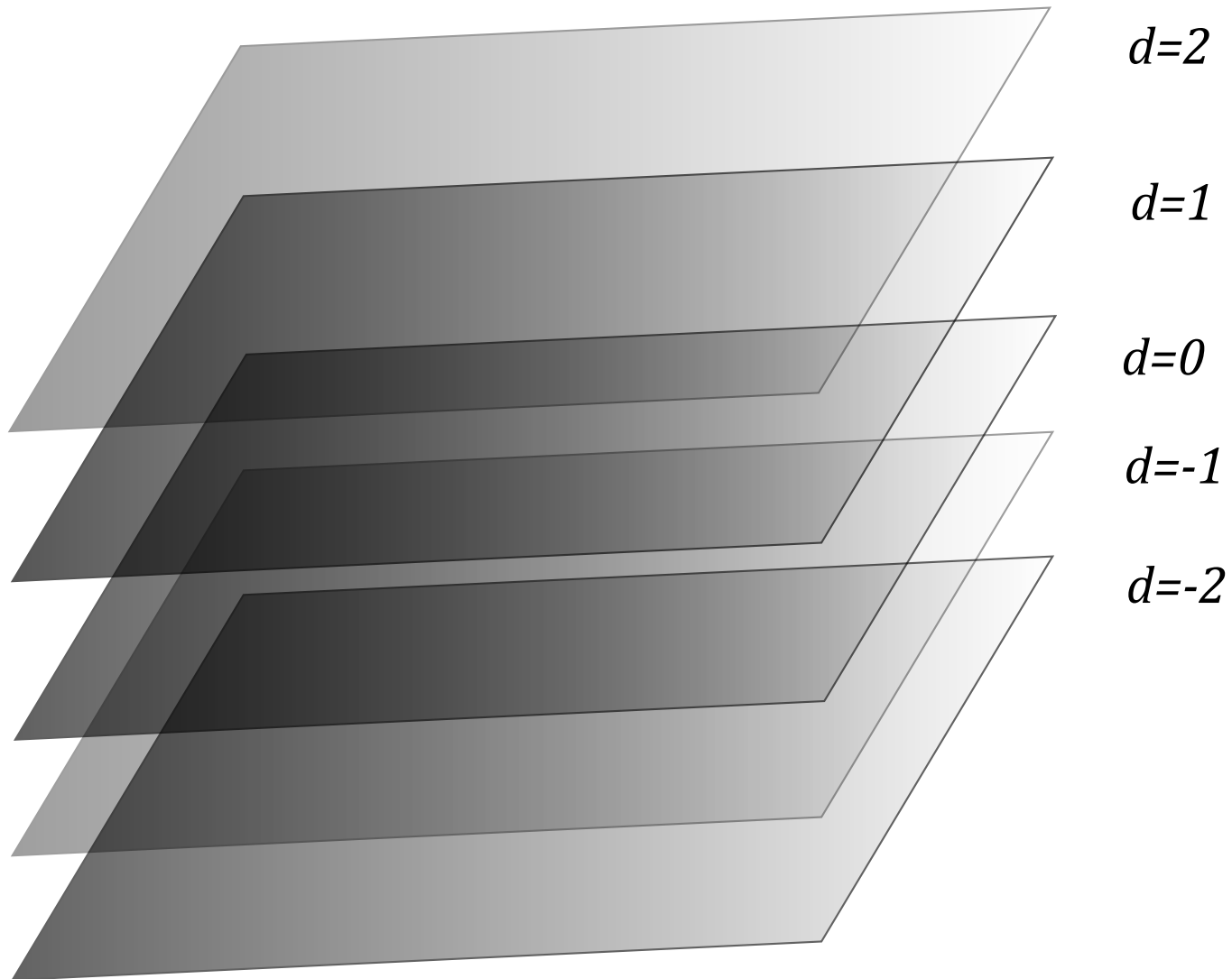
$$a'x + b'y + c'z + \dots \leq d'$$

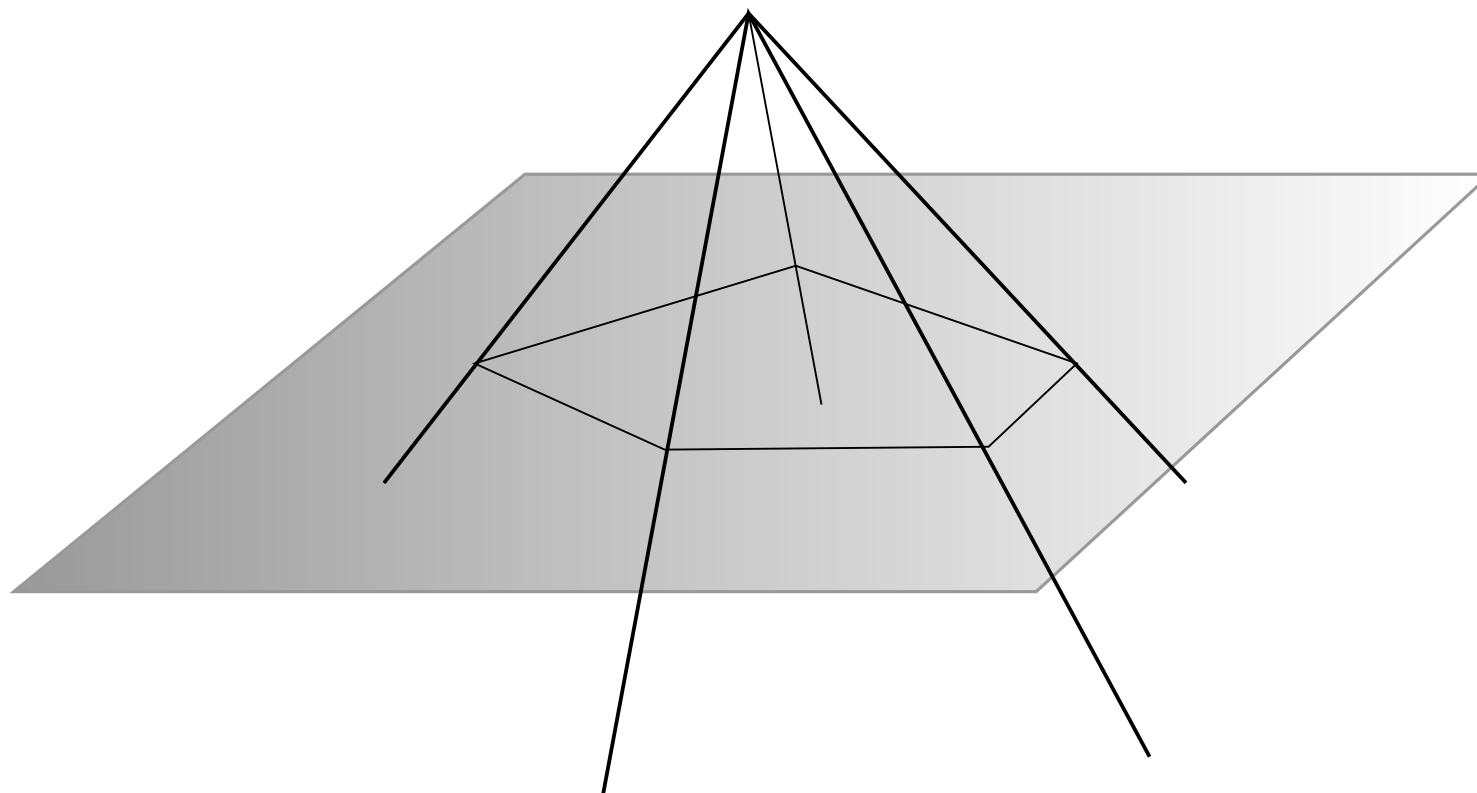
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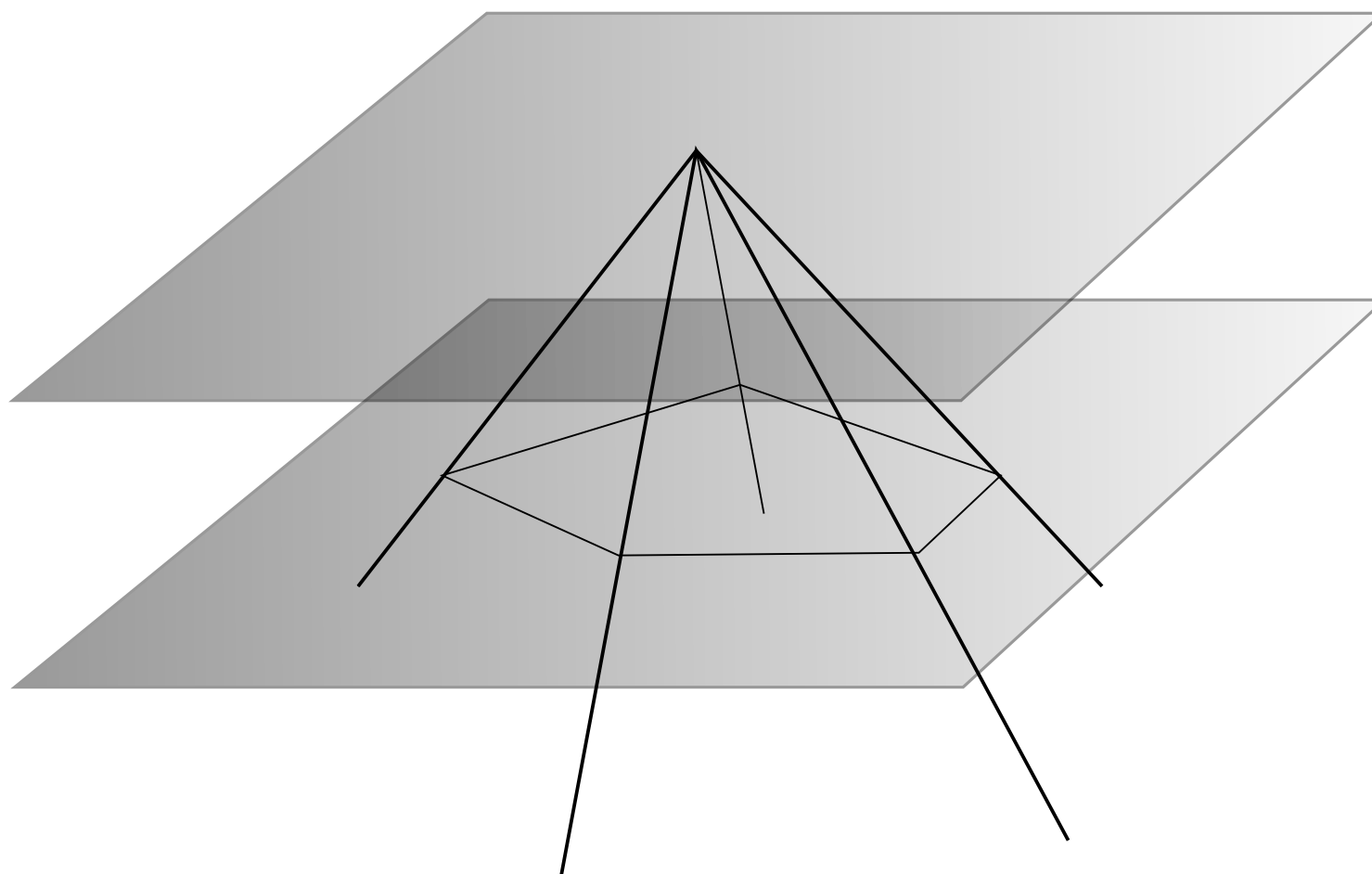
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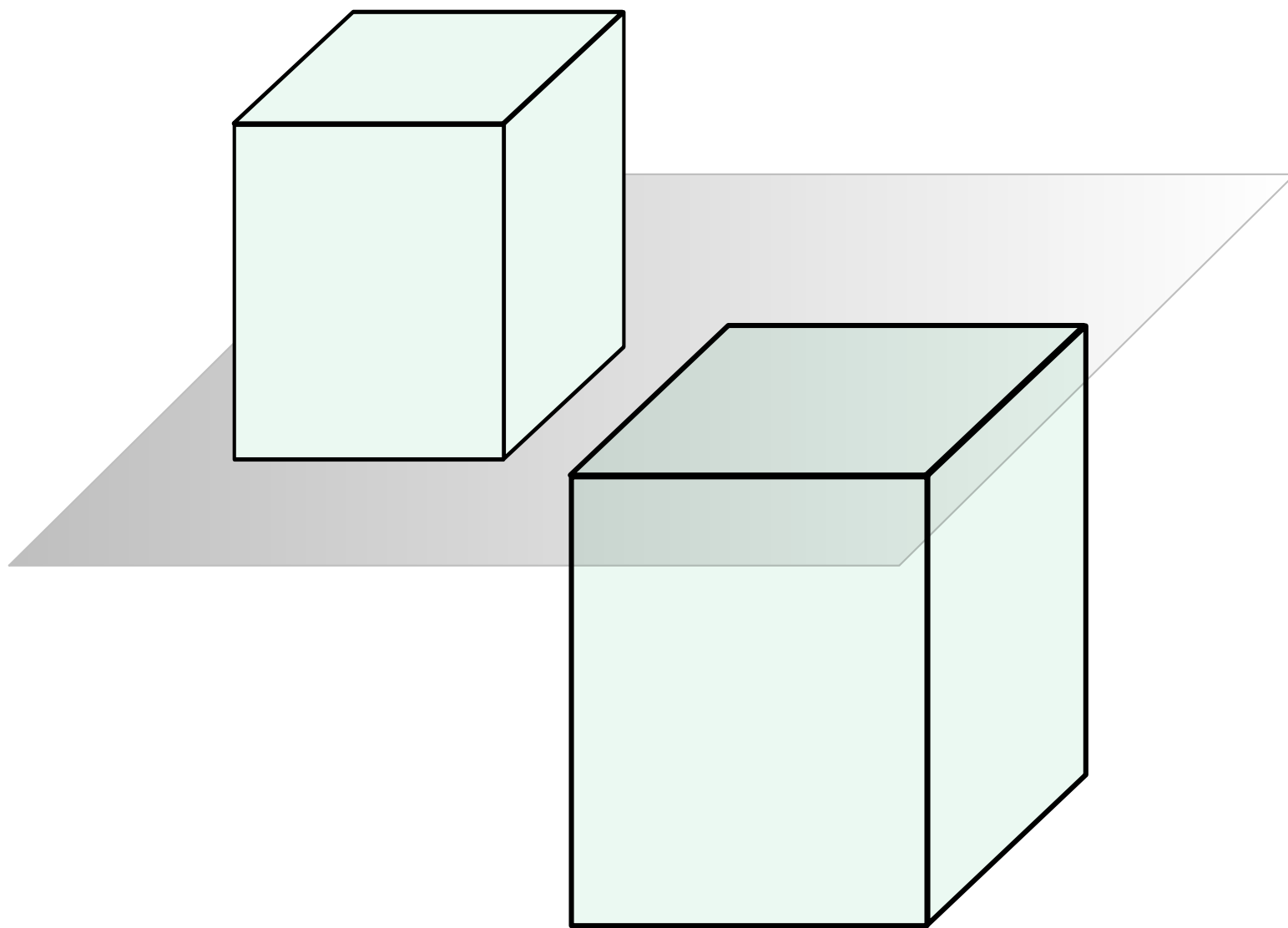
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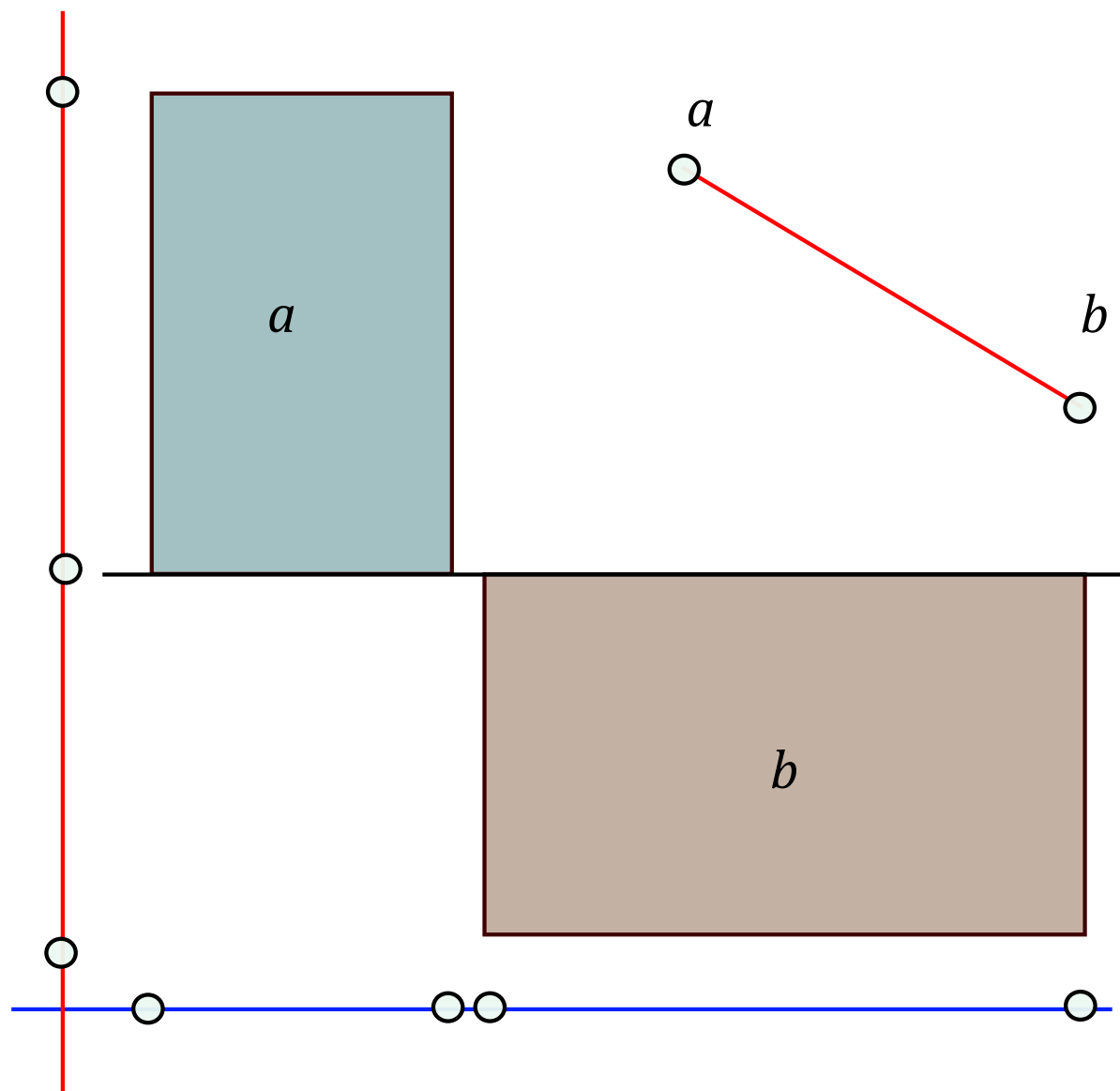
$$ax+by+cz=d$$

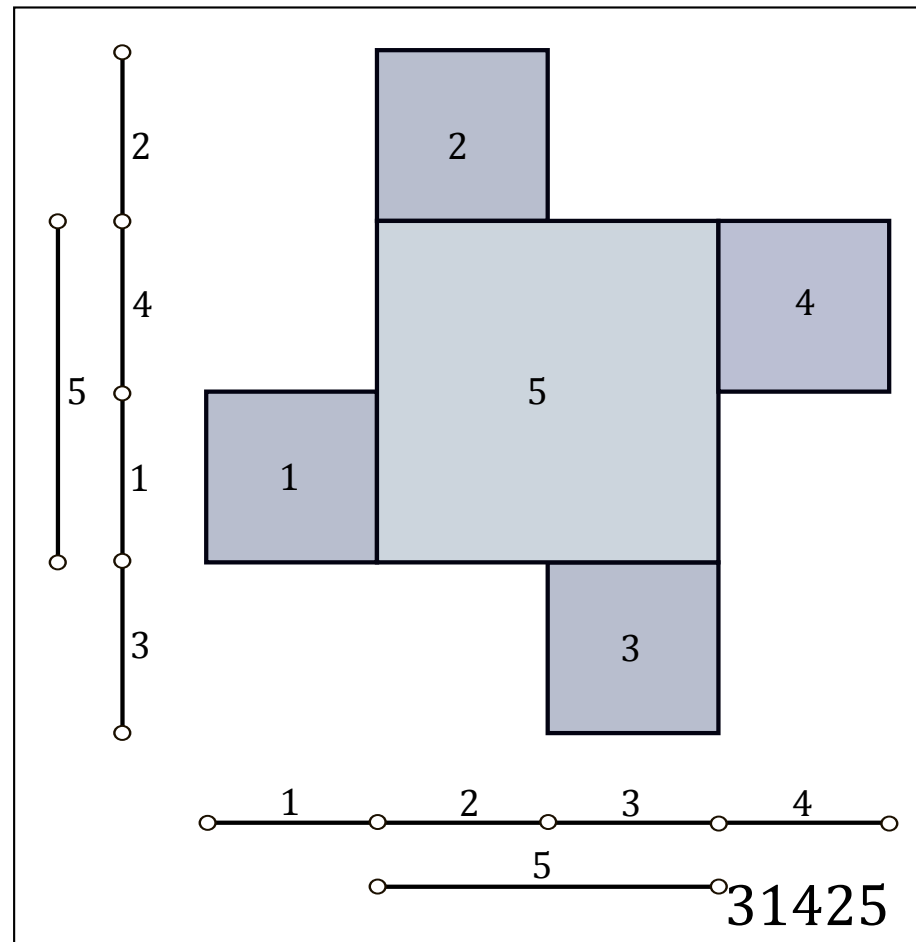


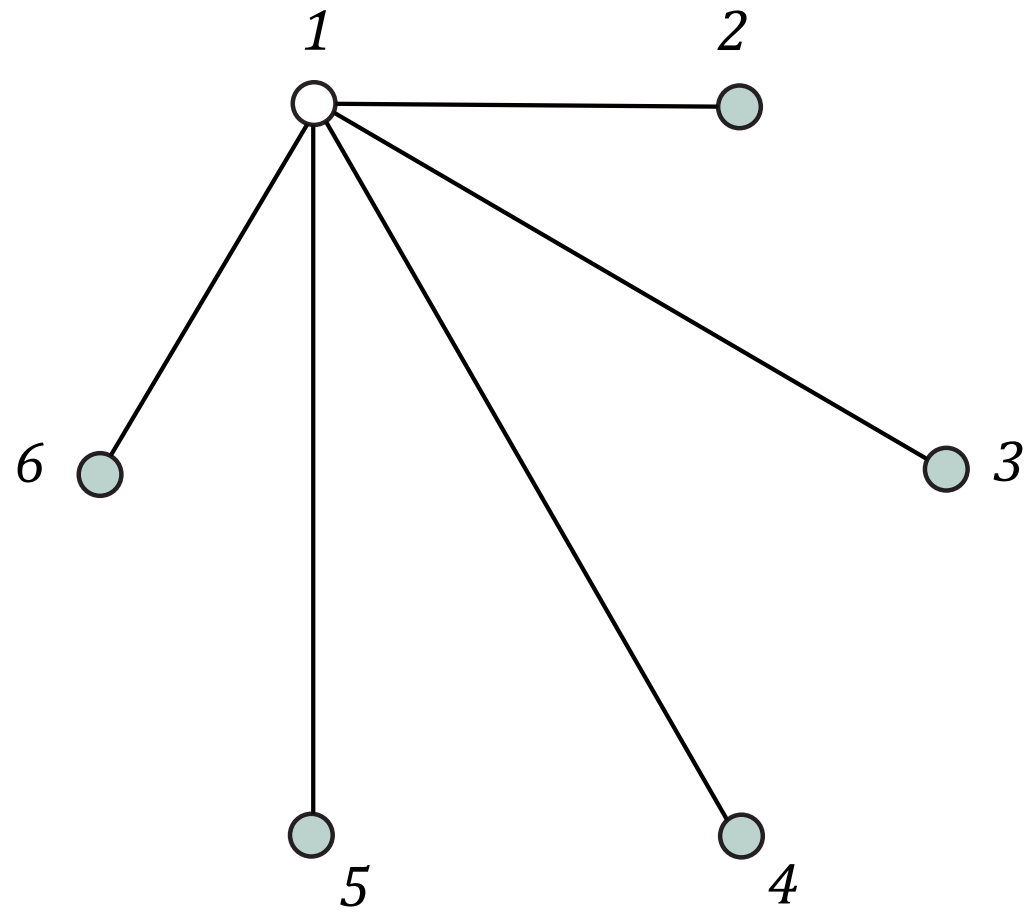


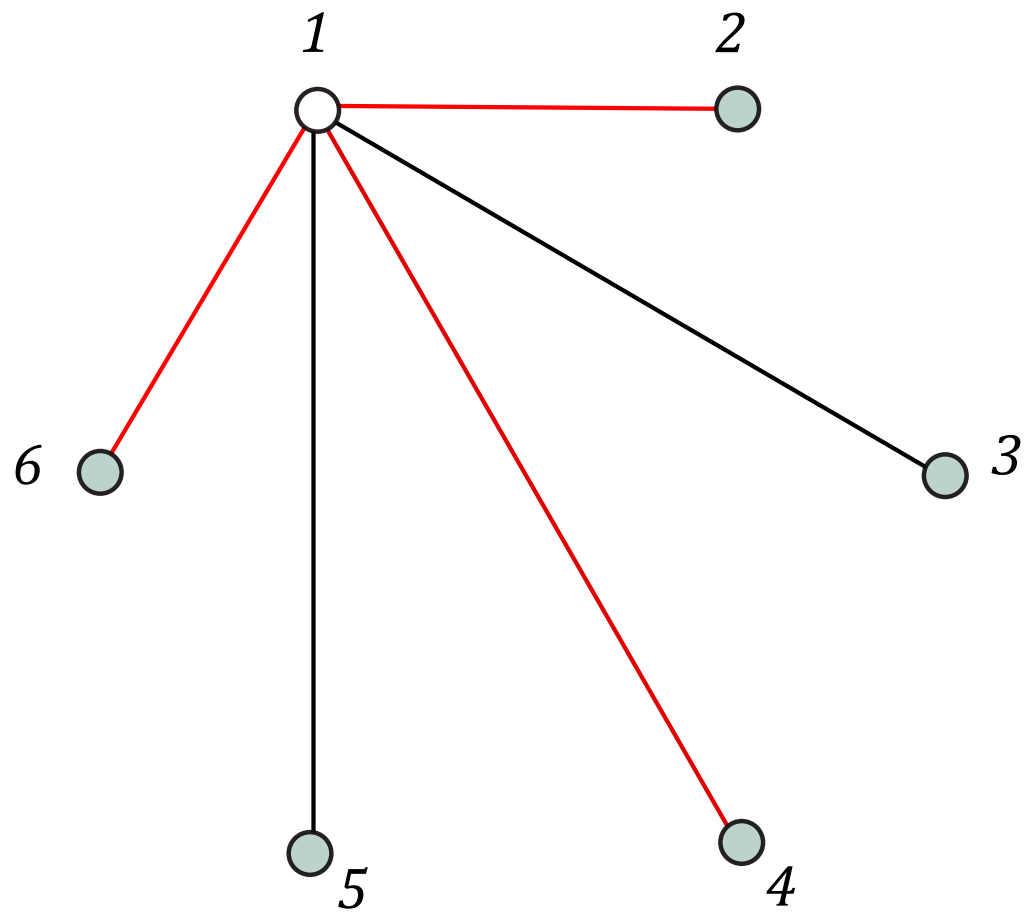


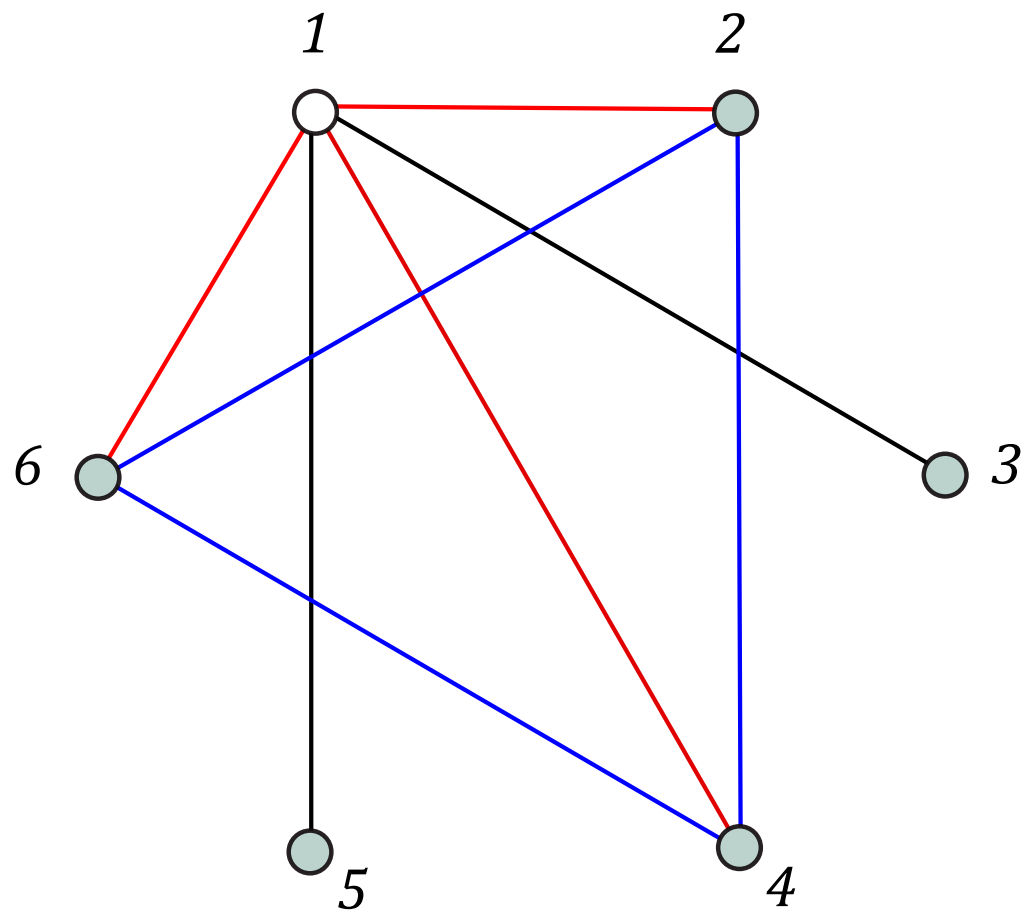


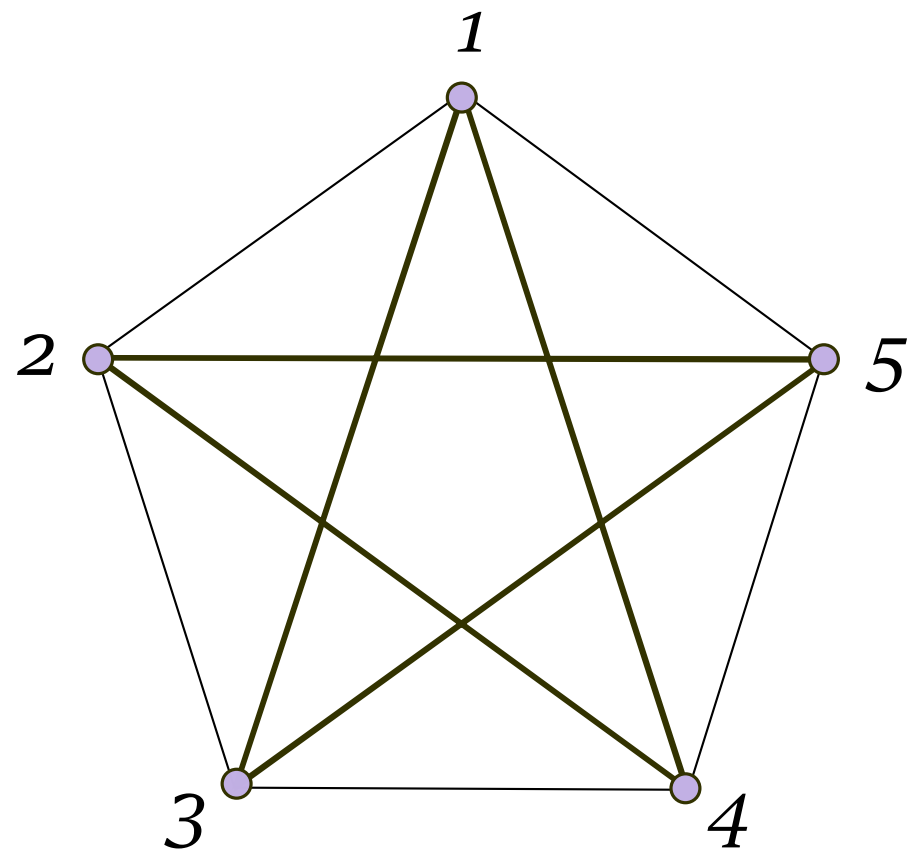


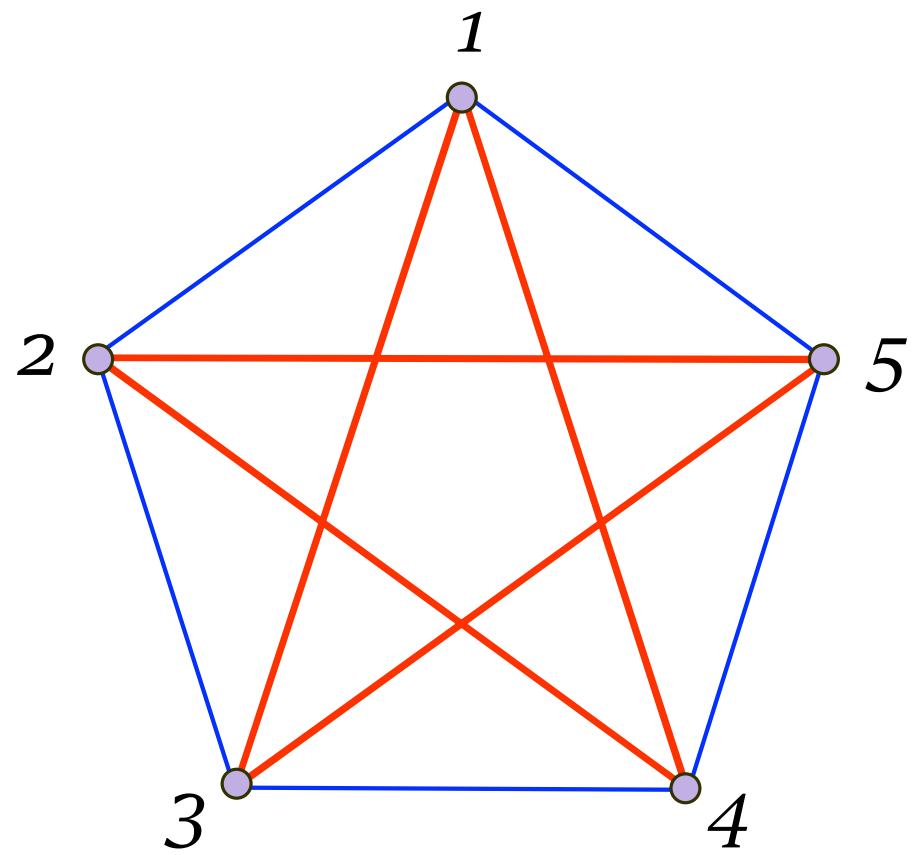


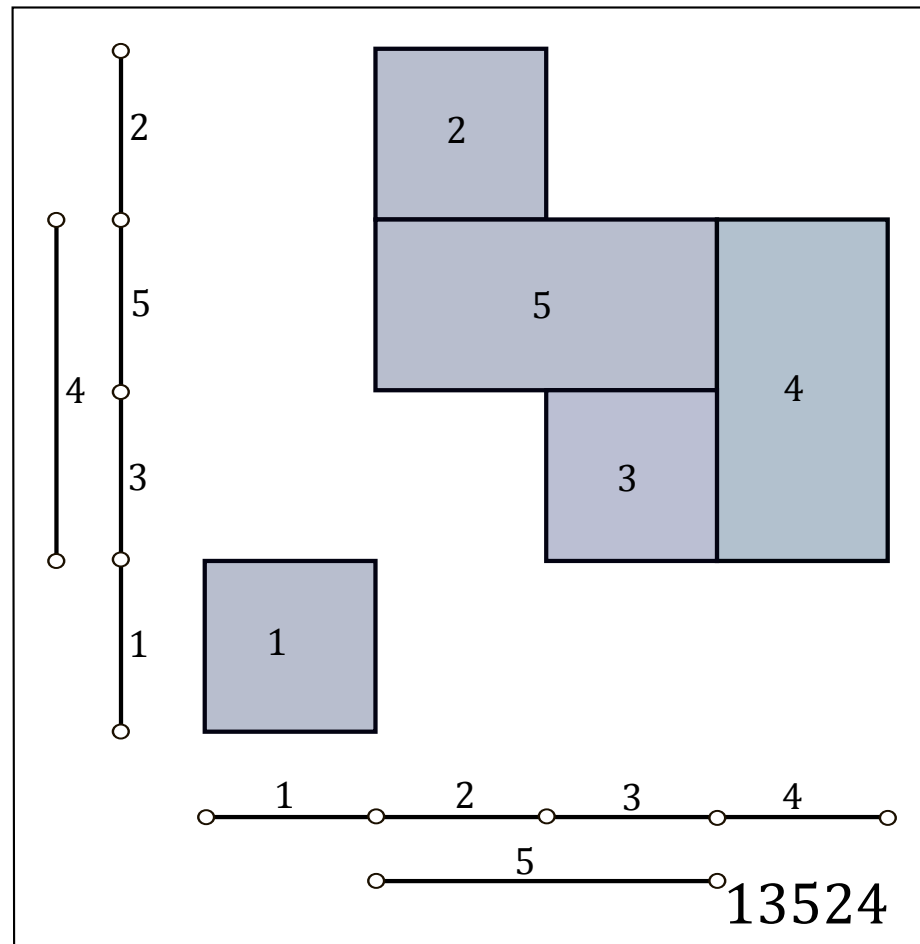


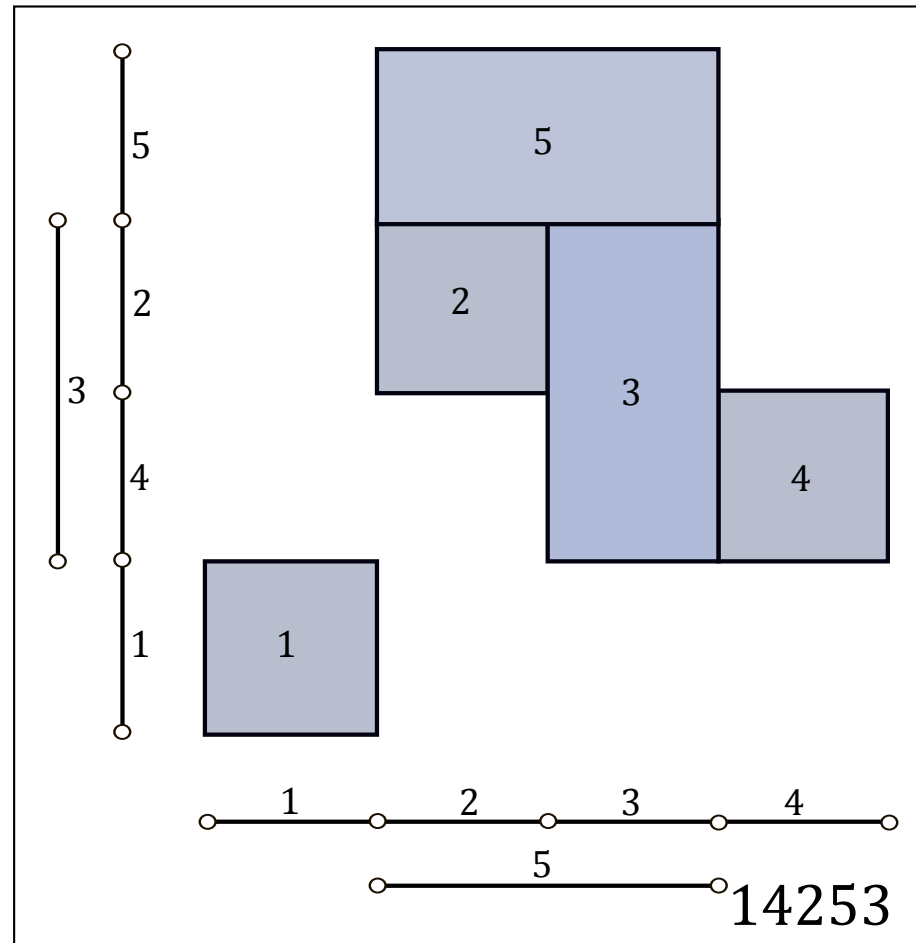


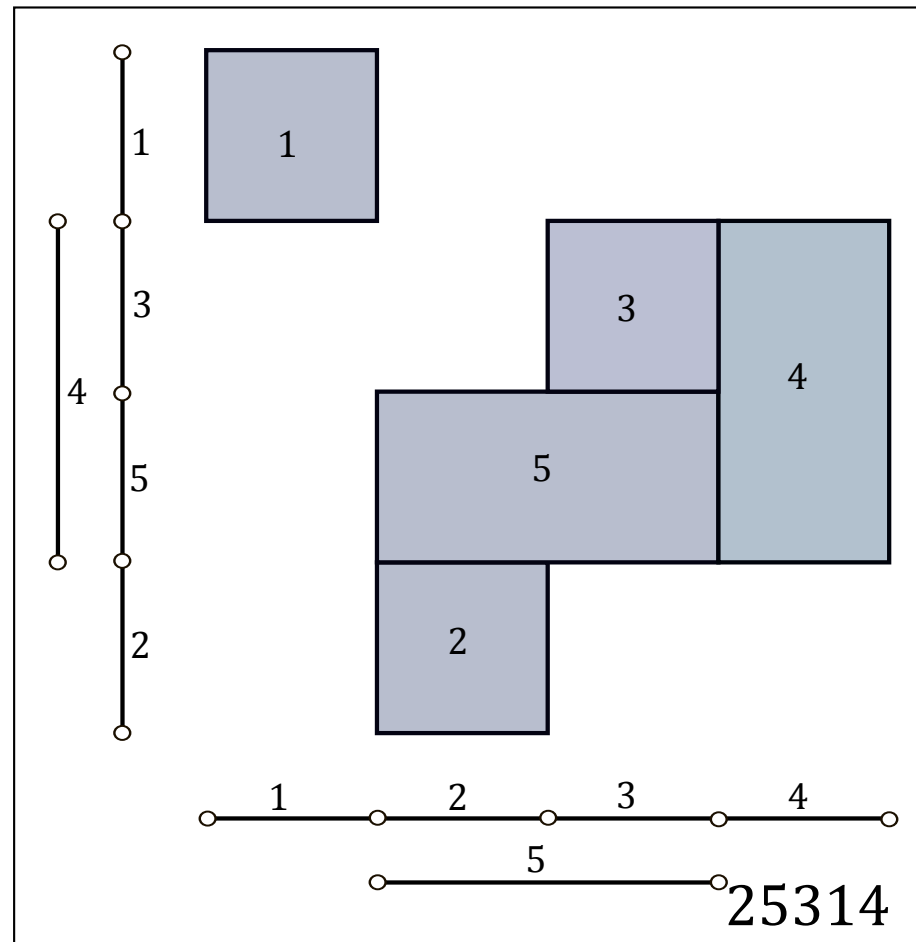


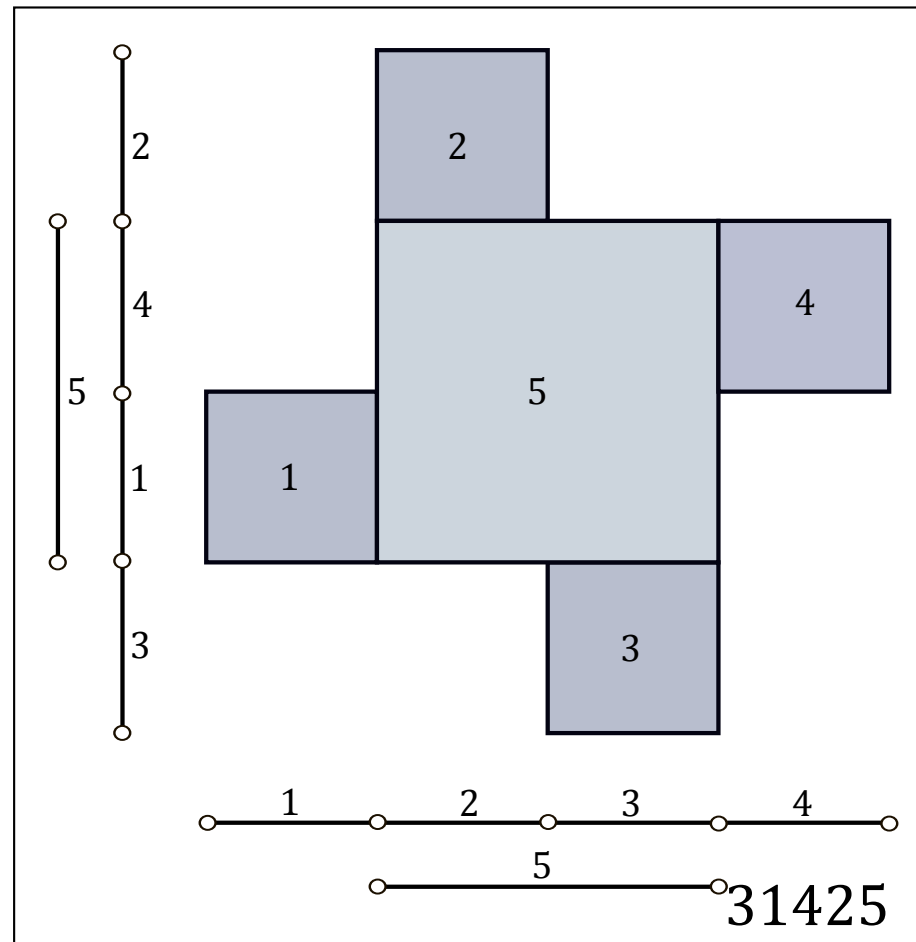


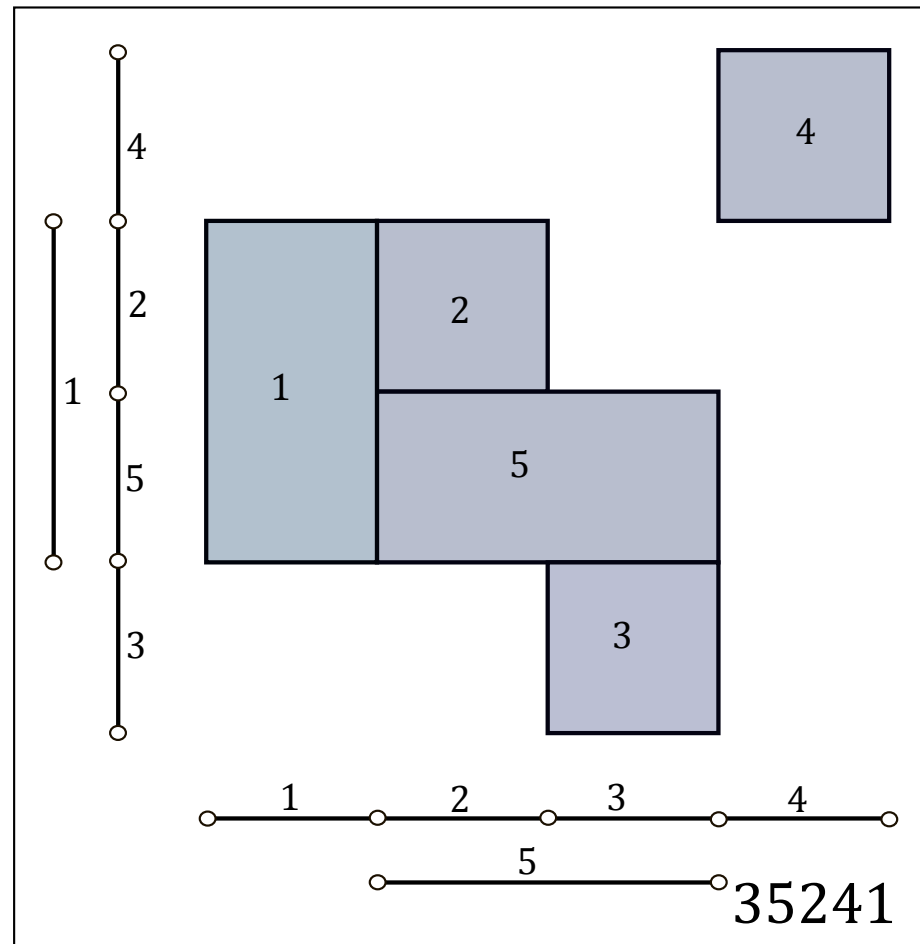


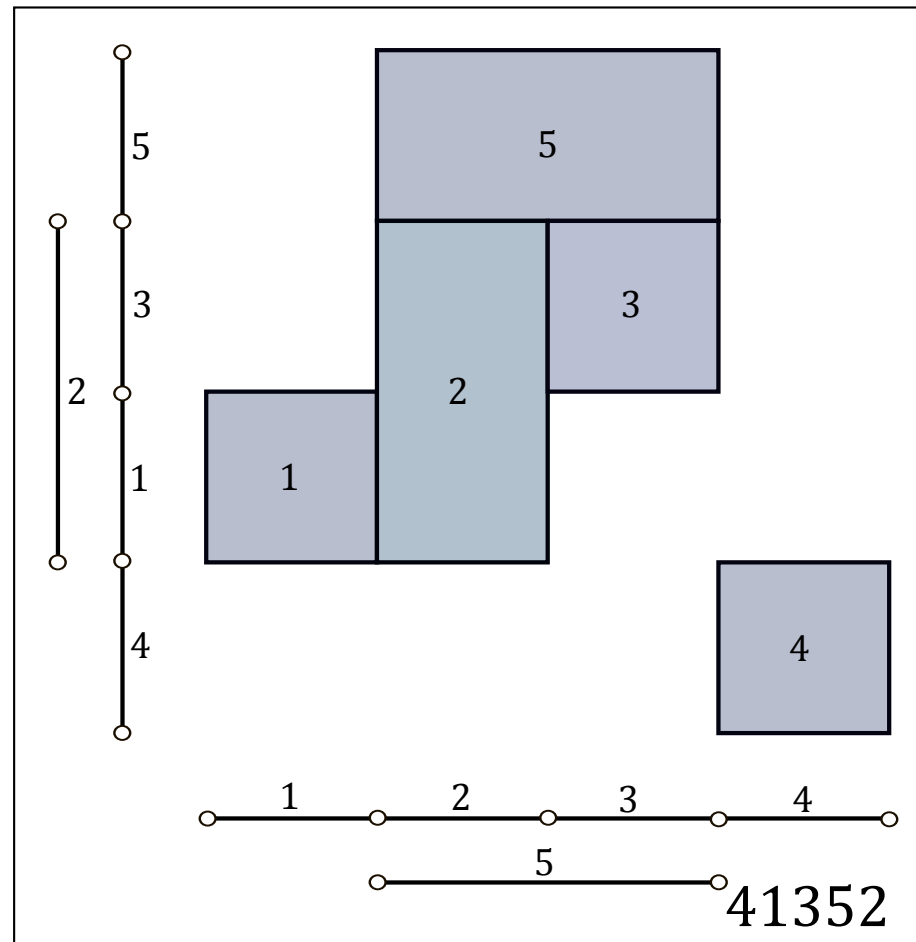


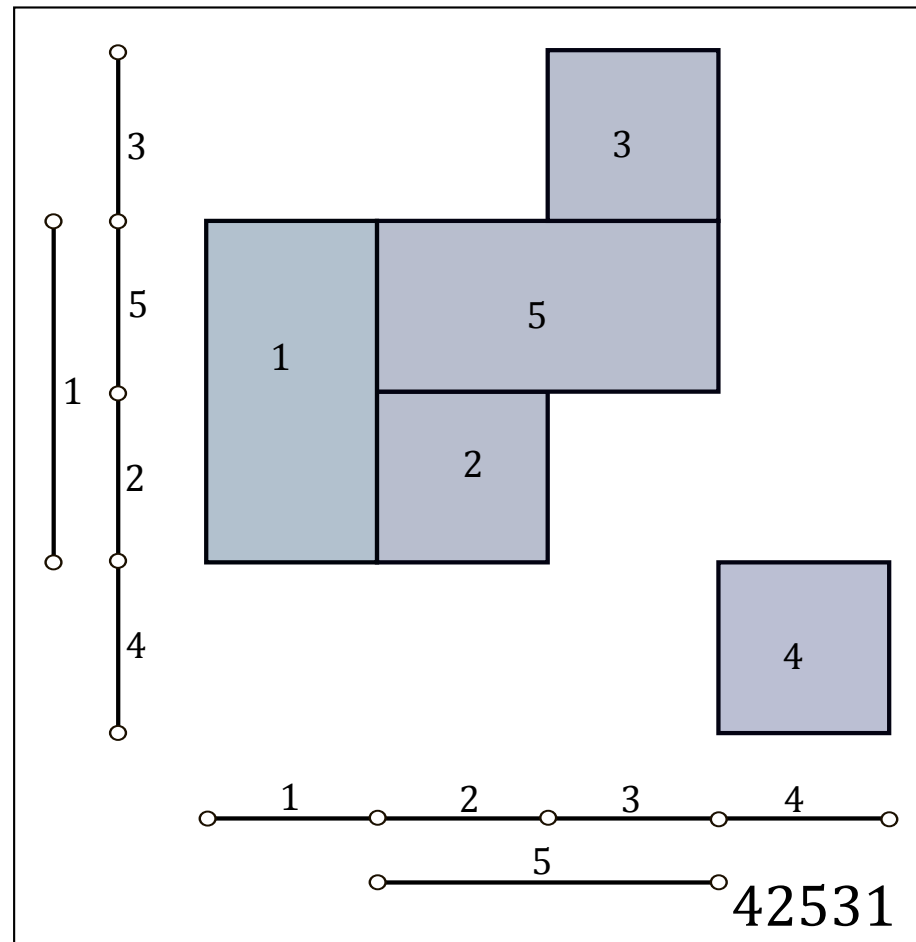


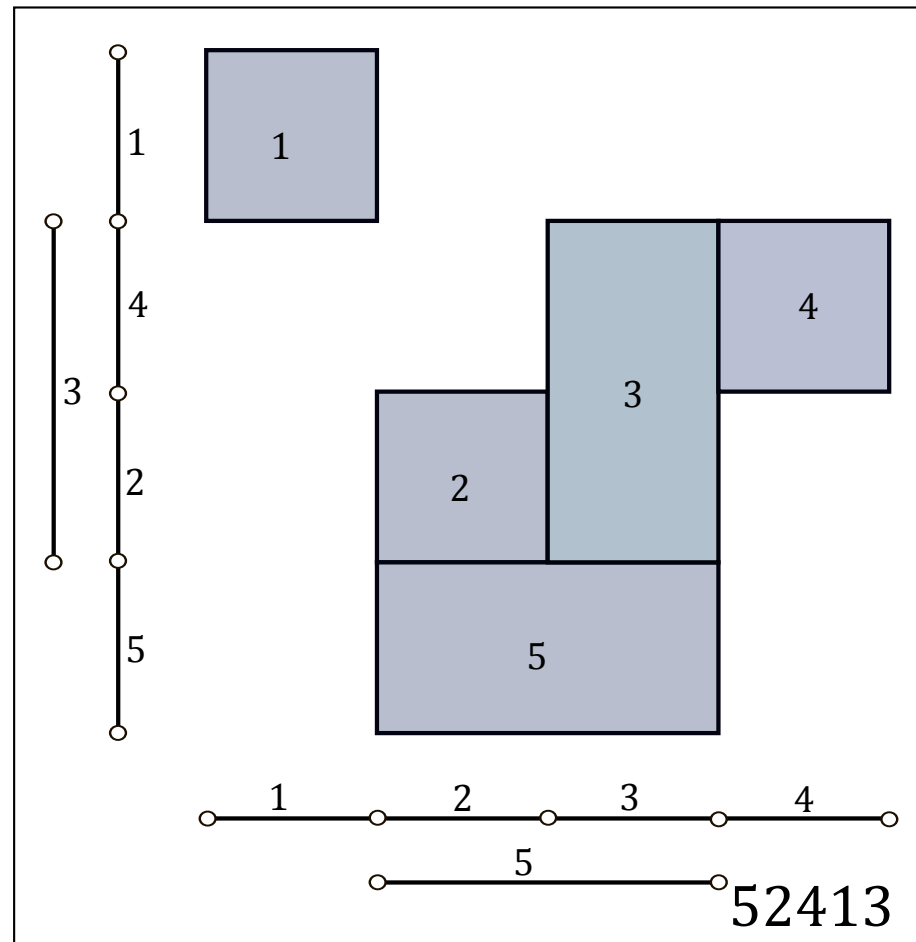


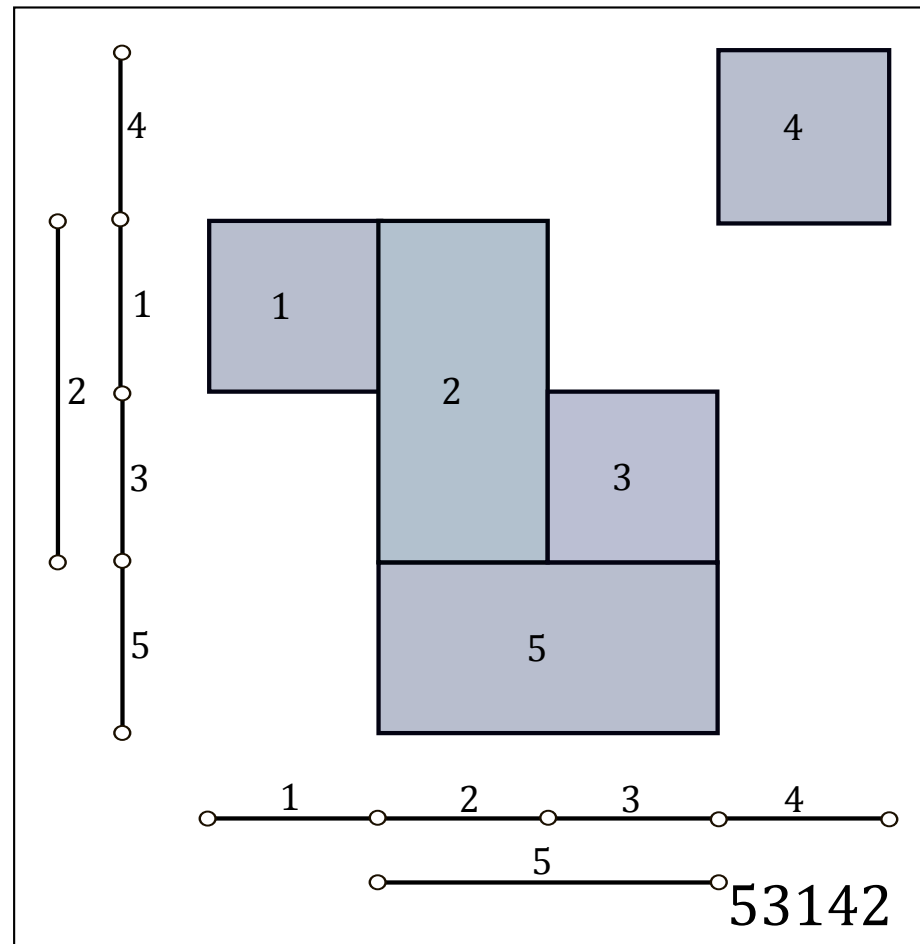


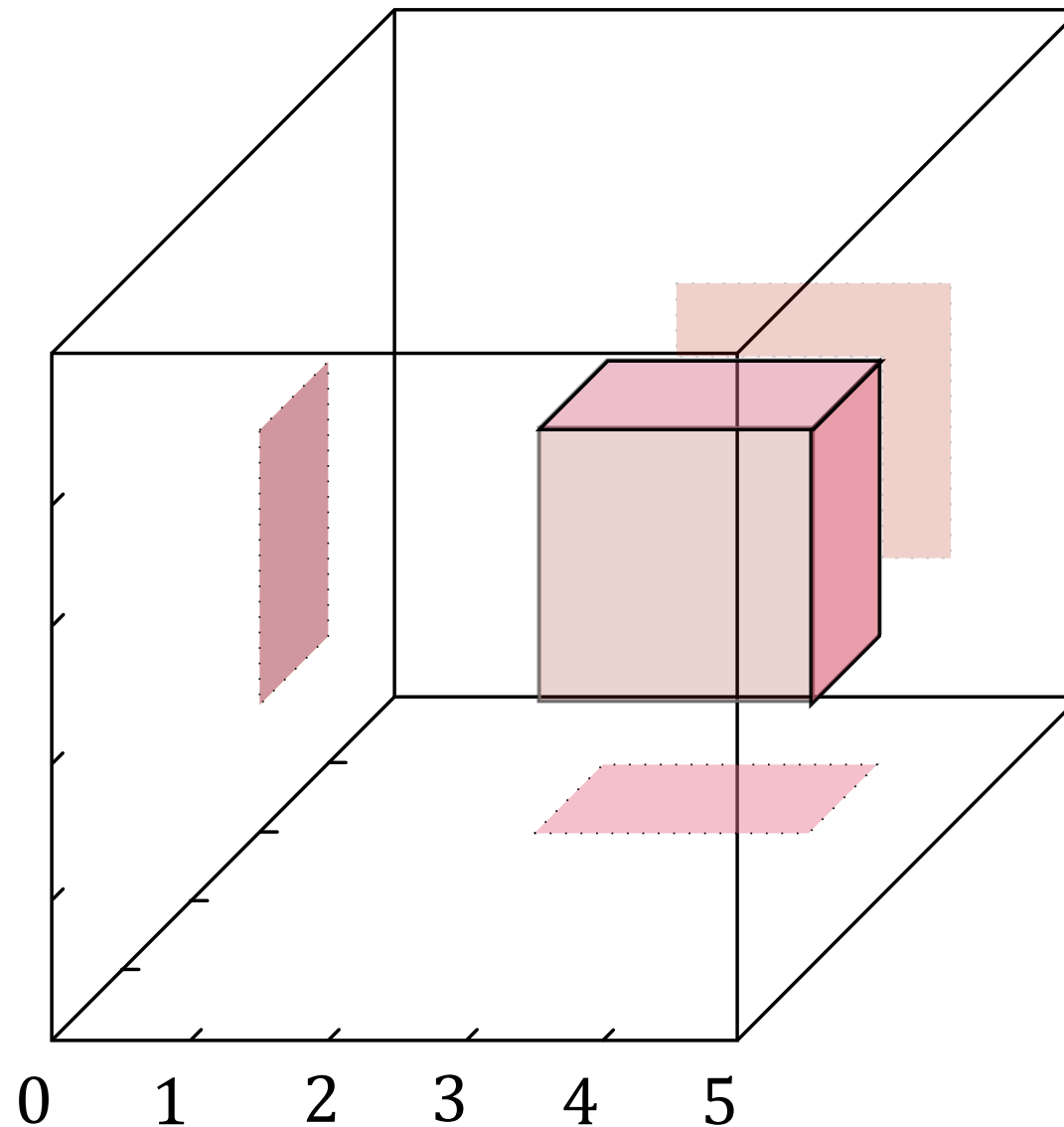












512 prostopadłościanów

zmaksymalizować:

$$f = x_1 + x_2 + x_3 + \dots + x_{512}$$

przy ograniczeniach:

$$x_i + x_j \leq 1, \quad \text{o ile } K_i, K_j \text{ nie przylegają}$$

x_i są binarne!!!

set $A := \{ \langle 0, 1 \rangle, \langle 1, 2 \rangle, \langle 1, 3 \rangle, \langle 1, 4 \rangle, \langle 2, 3 \rangle, \langle 2, 4 \rangle, \langle 3, 4 \rangle, \langle 4, 5 \rangle \};$

set $P[\langle x1, y1, x2, y2, x3, y3 \rangle \text{ in } A^*A^*A] := \{ \langle u1, v1, u2, v2, u3, v3 \rangle \text{ in } A^*A^*A$
with $(x1 \neq u1 \text{ or } x2 \neq u2 \text{ or } x3 \neq u3 \text{ or } y1 \neq v1 \text{ or } y2 \neq v2 \text{ or } y3 \neq v3)$
and $(x1 \neq v1 \text{ and } y1 \neq u1 \text{ and } x2 \neq v2 \text{ and } y2 \neq u2 \text{ and } x3 \neq v3 \text{ and } y3 \neq u3) \};$

var $x[A^*A^*A]$ binary;

maximize liczba: $\sum \langle x1, y1, x2, y2, x3, y3 \rangle \text{ in } A^*A^*A: x[x1, y1, x2, y2, x3, y3];$

subto niezal: forall $\langle x1, y1, x2, y2, x3, y3 \rangle \text{ in } A^*A^*A$ do
forall $\langle u1, v1, u2, v2, u3, v3 \rangle \text{ in } P[x1, y1, x2, y2, x3, y3]$ do
 $x[x1, y1, x2, y2, x3, y3] + x[u1, v1, u2, v2, u3, v3] \leq 1;$