MATURA ROZSZERZONA 2020 r.

Zad. 1

$$W(x) = x^{2019} - 3x^{2000} + 2x + 6$$

$W(1) = 1 - 3 + 2 + 6 = 6 \implies (x-1) \nmid W(x)$

$W(-1) = -1 - 3 - 2 + 6 = 0 \implies (x+1) \mid W(x)$

więc: $\left.\begin{array}{l} W(x) = (x-1)\cdot P(x) + 6 \\ W(x) = (x+1)\cdot Q(x) \end{array}\right\} \implies$ B

Zad. 2

$$a_n = \frac{3n^2 + 7n - 5}{11 - 5n + 5n^2} \qquad \lim_{n\to\infty} a_n = ?$$

$$\lim_{n\to\infty} a_n = \frac{3}{5}$$

C

Zad. 3

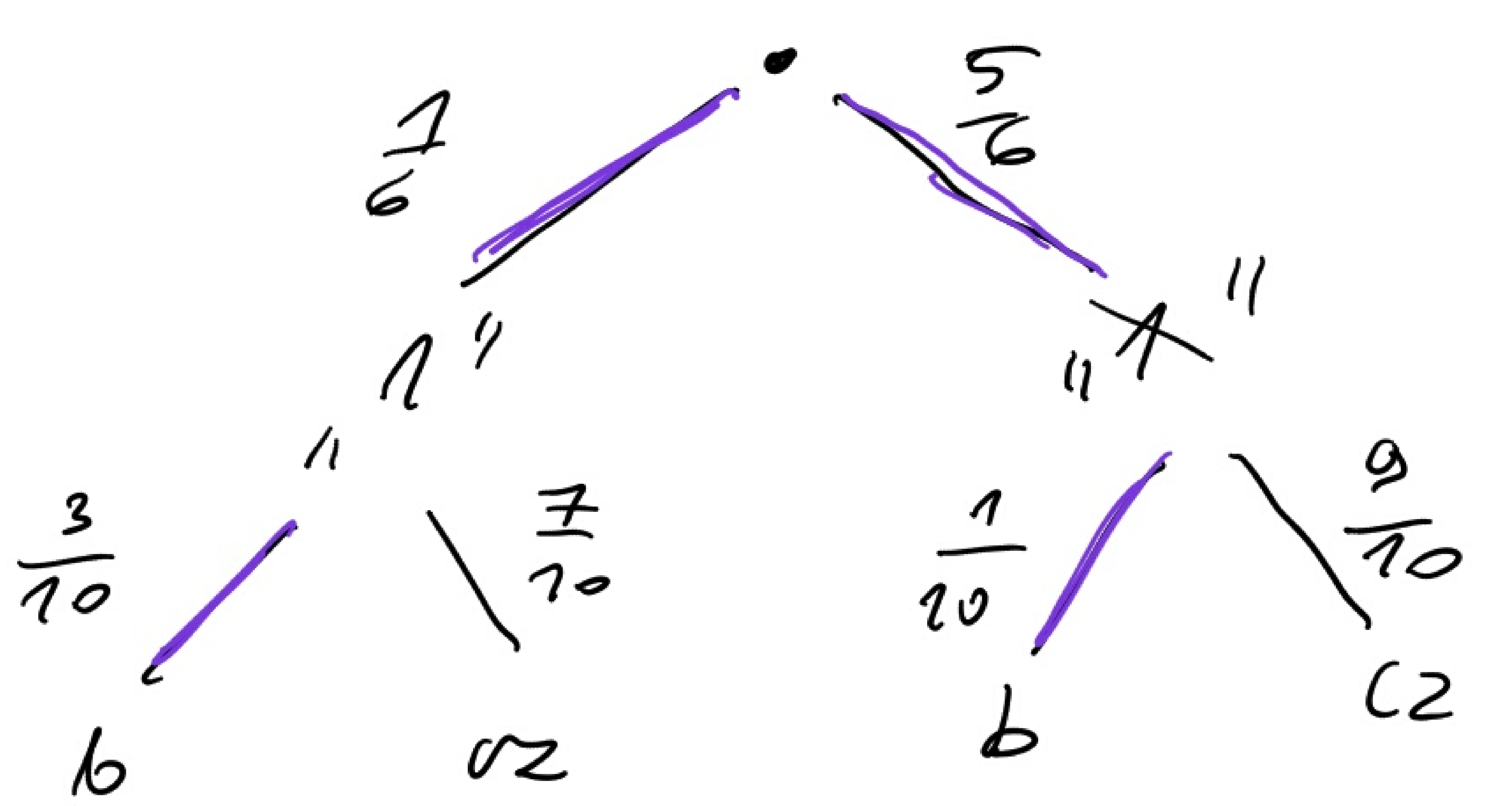
RZUT KOSTKĄ:

I: 3b + 7cz. ⇐ losujemy dla „1" na kostce

II: 1b + 9cz. ⇐ — „ — dla ≠ „1"

P(A) = ?

A – wylosowano kulę białą



RZUT KOSTKĄ

LOSOWANIE Z URNY

$$P(A) = \frac{1}{6}\cdot\frac{3}{10} + \frac{5}{6}\cdot\frac{1}{10} = \frac{3}{60} + \frac{5}{60} = \frac{8}{60} = \frac{2}{15}$$

A

Zad 4.

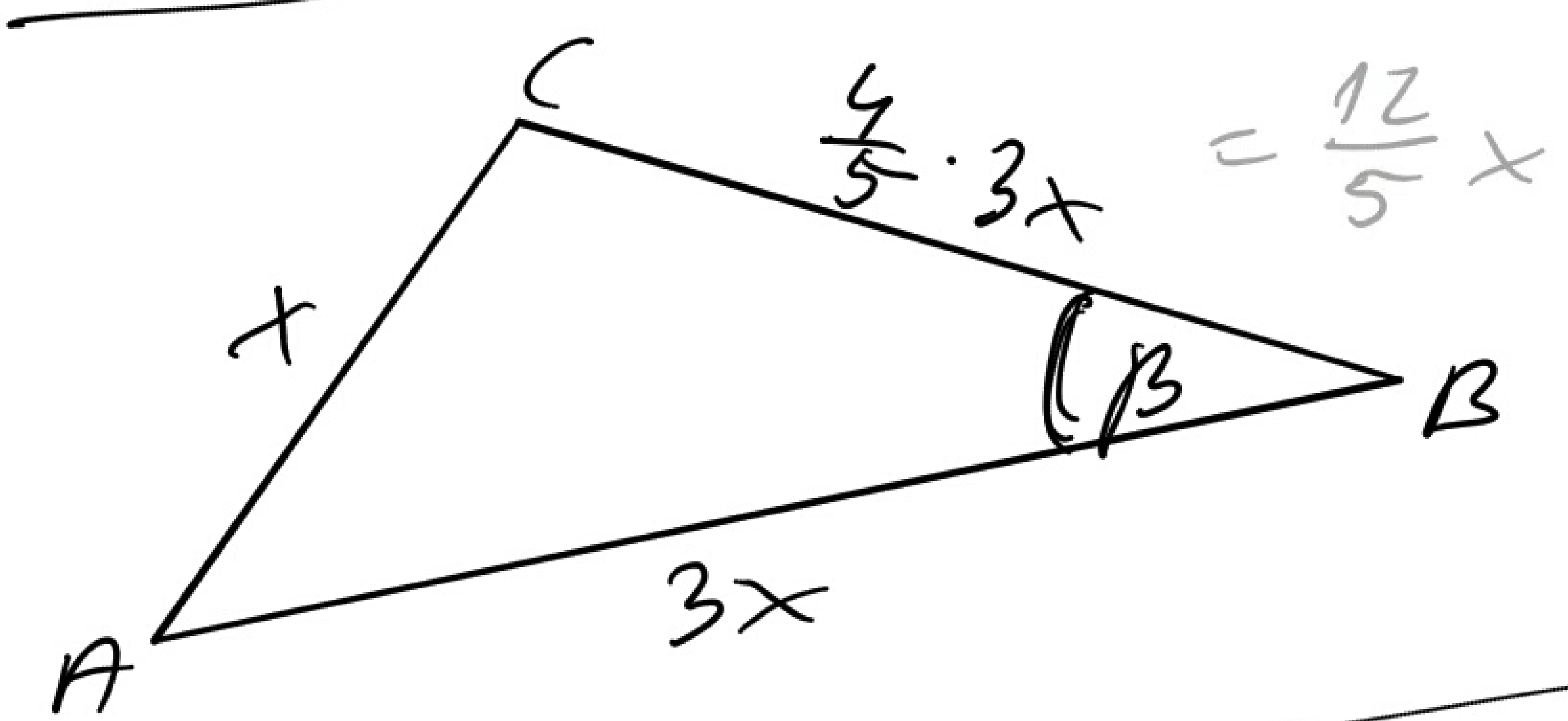
$$L = (x\sqrt{2} + y\sqrt{3})^4$$
$$L = ax^4 + bx^3 + cx^2y^2 + dxy^3 + ey^4 \quad \Big| \quad c = ?$$

$$L = (2x^2 + 2\sqrt{6}\,xy + 3y^2)^2$$
$$= 4x^4 + \underline{\underline{24x^2y^2}} + 9y^4 + 2(4\sqrt{6}x^3y + \underline{\underline{6x^2y^2}} + 6\sqrt{6}\,xy^3)$$

$$\underline{\underline{c}} = 24 + 2\cdot 6 = 24 + 12 = \underline{\underline{36}}$$

B

Zad. 5 <2 pkt.>



$$\cos\beta = ?$$

Tw. cosin.

$$x^2 = 9x^2 + \frac{144}{25}x^2 - 2\cdot 3x\cdot\frac{12}{5}x\cos\beta \quad \Big| :x^2 > 0$$
$$1 = 9 + \frac{144}{25} - \frac{6\cdot 12}{5}\cos\beta$$
$$\frac{6\cdot 12}{5}\cos\beta = 8 + \frac{144}{25} = \frac{344}{25} \quad \Big| \cdot\frac{5}{6\cdot 12}$$
$$\cos\beta = \frac{200+144}{\cancelto{5}{25}}\cdot\frac{\cancel{5}}{6\cdot 12} = \frac{\cancelto{43}{\cancelto{86}{344}}}{\cancelto{15}{30}\cdot\cancelto{3}{12}} = \frac{43}{45}$$

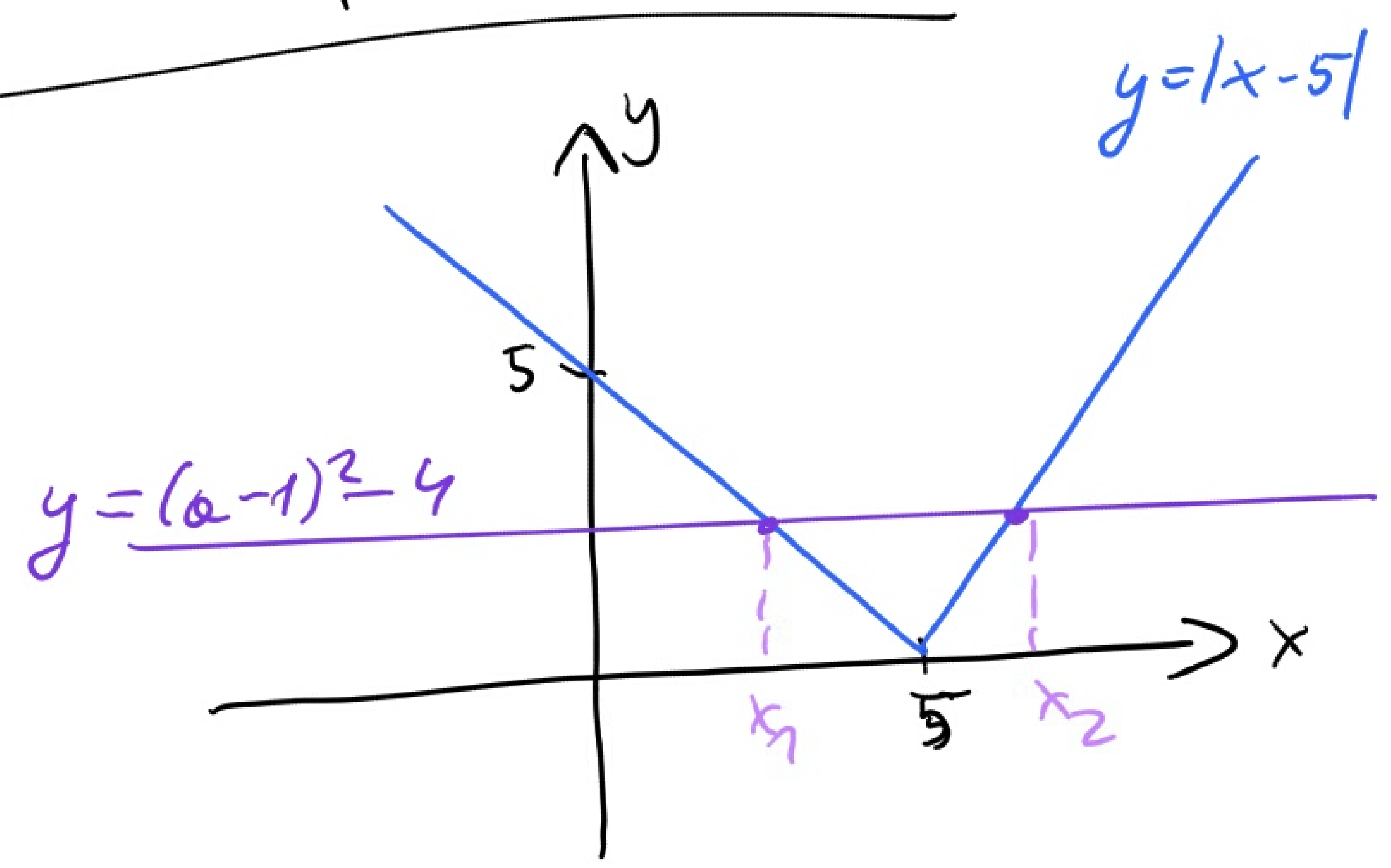
$$\cos\beta \approx 0{,}9555\ldots$$

Zad. 6 <3 pkt.>

$$|x-5|=(a-1)^2-4 \qquad a=?$$
$$x_1\neq x_2$$
$$x_1, x_2>0$$

I METODA:

analiza wykresów

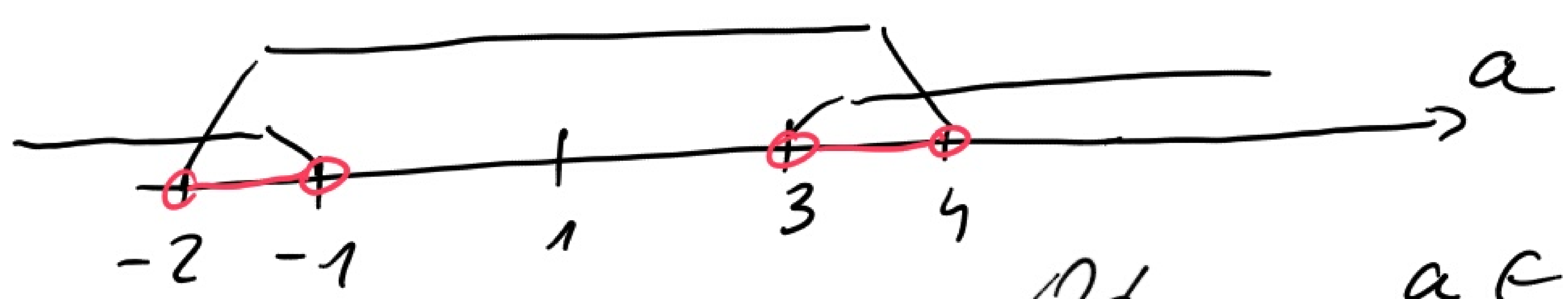


$(a-1)^2-4\in(0;5) \quad /+4$

$(a-1)^2\in(4;9) \quad /\sqrt{\ }$

$|a-1|\in(2;3)$

$|a-1|>2 \quad \wedge \quad |a-1|<3$



Odp: $\underline{a\in(-2;-1)\cup(3;4)}$

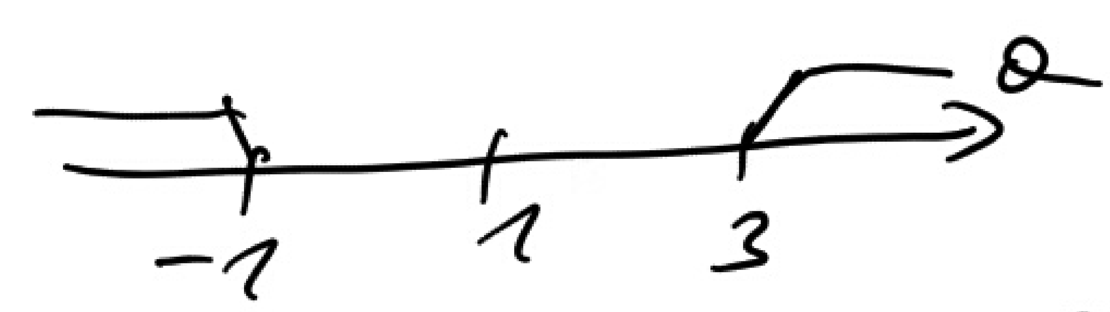
II METODA:

$$|x-5|=(a-1)^2-4$$

zał. $(a-1)^2-4>0$

$(a-1)^2>4 \quad /\sqrt{\ }$

$|a-1|>2$



$D: a\in(-\infty;-1)\cup(3;\infty)$

$x-5=(a-1)^2-4 \quad \vee \quad x-5=4-(a-1)^2$

$x_1=(a-1)^2+1 \quad \vee \quad x_2=9-(a-1)^2$

(1) $x_1\neq x_2$: $(a-1)^2+1\neq 9-(a-1)^2$

$2(a-1)^2\neq 8 \quad /:2$

$(a-1)^2\neq 4 \quad /\sqrt{\ }$

$|a-1|\neq 2 \Rightarrow z_1: a\in\mathbb{R}-\{-1;3\}$

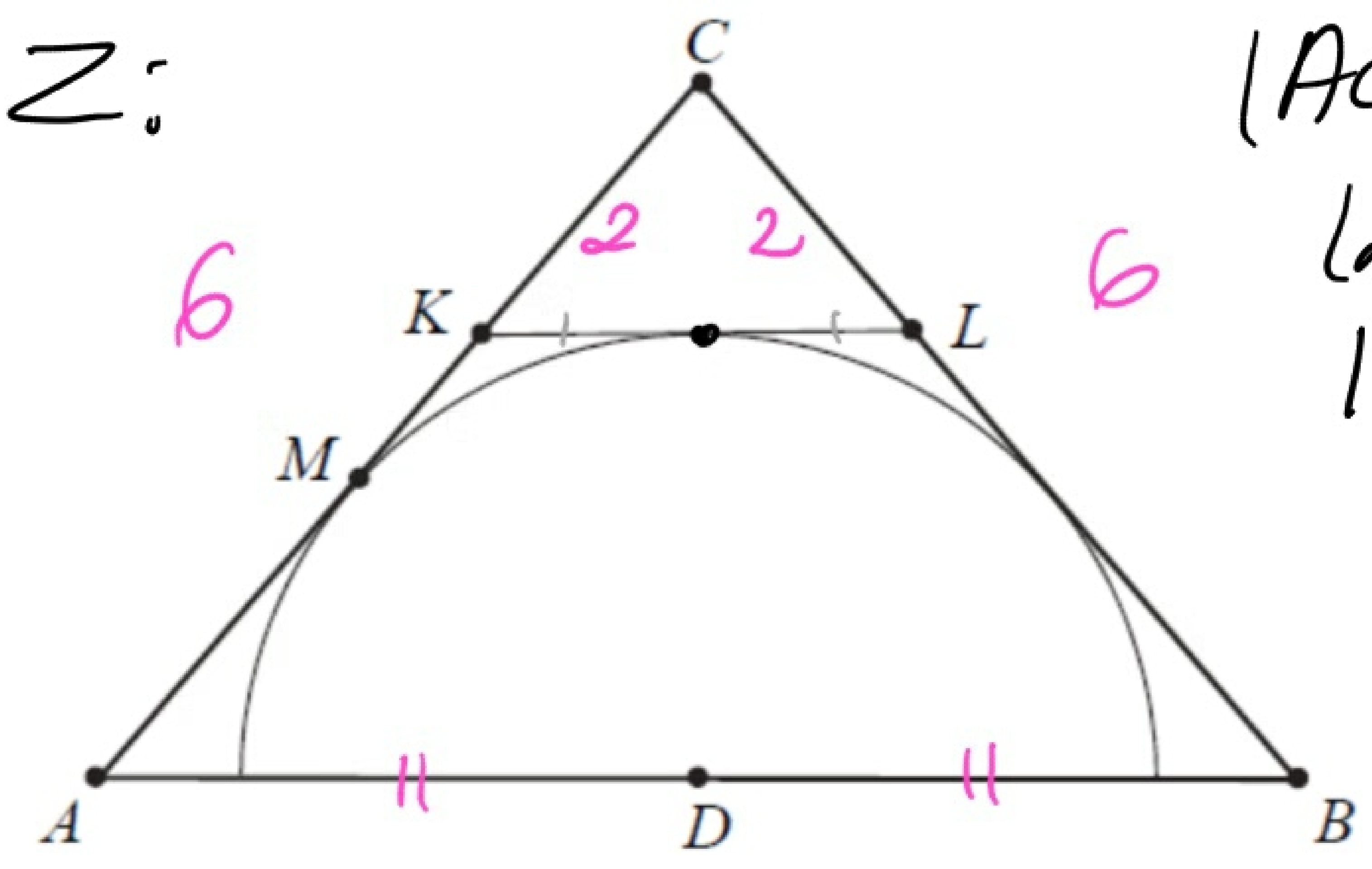
(2) $\begin{cases} x_1>0 \\ x_2>0 \end{cases}$ $\begin{cases} (a-1)^2>-1 \\ -(a-1)^2>-9 \end{cases}$ $\begin{cases} a\in\mathbb{R} \\ (a-1)^2<9 \end{cases} \quad /\sqrt{\ }$

$\begin{cases} a\in\mathbb{R} \\ |a-1|<3 \end{cases}$ $\begin{cases} a\in\mathbb{R} \\ a\in(-2;4) \end{cases} \Rightarrow z_2: a\in(-2;4)$

Odp: $z_1\cap z_2\cap D$: $\underline{a\in(-2;-1)\cup(3;4)}$

Zad. 7 <3 pkt.>

Z:



$|AC| = |BC| = 6$

$|DA| = |DB|$

$|KC| = |LC| = 2$

T:

$$\frac{|AM|}{|MC|} = \frac{4}{5}$$

(1)

D: $|KL| = |KC|$

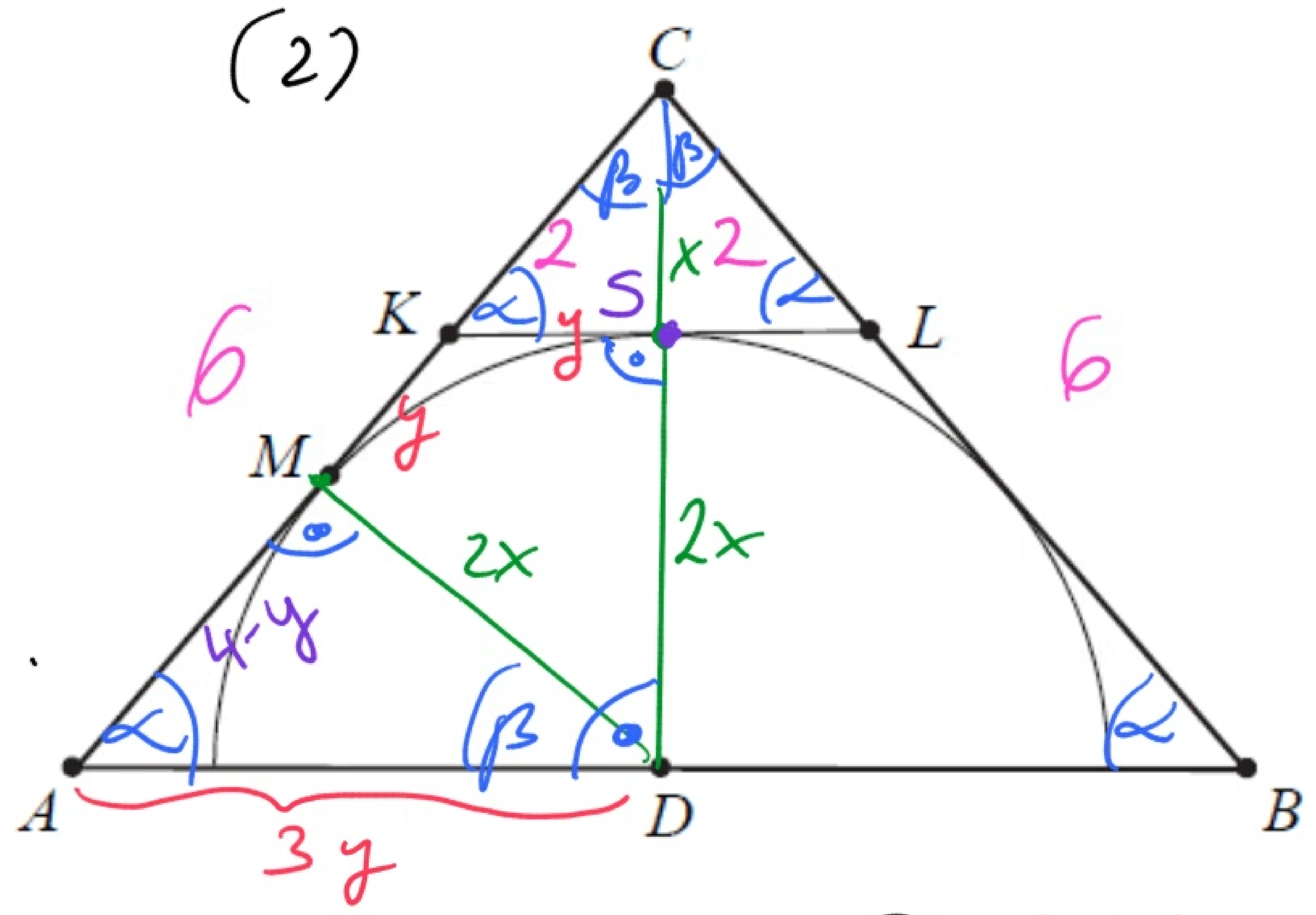
$\Downarrow$

$\overline{KL} \parallel \overline{AB}$

oraz

$|AK| = 6 - 2 = 4$

(2)



(3) $\Delta KSC \sim \Delta ADC \sim \Delta AMD$ z wł. kkk $(\alpha, 90°, \beta)$

$$\frac{|AC|}{|KC|} = \frac{6}{2} = 3 \Rightarrow \begin{cases} |AD| = 3|KS| = 3y \\ |DC| = 3|SC| = 3x \end{cases} \wedge \ \Delta KMD \equiv \Delta KSD$$

bkb

$\Downarrow$

$|MK| = |SK| = y$

oraz

$$\frac{|AD|}{|KC|} = \frac{|AM|}{|KS|} \Rightarrow \frac{3y}{2} = \frac{4-y}{y} \Rightarrow 3y^2 = 8 - 2y \Rightarrow 3y^2 + 2y - 8 = 0$$

$$\Delta_y = 4 - 4 \cdot 3 \cdot (-8) = 10^2$$

$$\text{dla } y > 0: \ y = \frac{-2 \mp 10}{2 \cdot 3} = \frac{8}{6} = \frac{4}{3}$$

(4) $|AM| = 4 - y = 4 - \frac{4}{3} = \frac{8}{3}$

$|MC| = y + 2 = \frac{4}{3} + 2 = \frac{10}{3}$

(5) $$\frac{|AM|}{|MC|} = \frac{8}{3} : \frac{10}{3} = \frac{8}{3} \cdot \frac{3}{10} = \frac{4}{5}$$

cnd.

Zad. 8 < 3p >

Z: $a, b > 0$

$a^2 + 2a = 4b^2 + 4b$

T: $a = 2b$

D: $a^2 + 2a = 4b^2 + 4b$

$a^2 - 4b^2 + 2a - 4b = 0$

$(a-2b)(a+2b) + 2(a-2b) = 0$

$(a-2b)[(a+2b)+2] = 0$

$(a-2b)\cdot(a+2b+2) = 0$

$a - 2b = 0 \quad \vee \quad a + 2b + 2 = 0$

sprzeczne dla $a, b > 0$

$\underbrace{a = 2b}$

chd

Zad. 9 $\langle 4$ pkt. $\rangle$

$$3\cos 2x + 10\cos^2 x = 24\sin x - 3 \quad \text{dla } x \in \langle 0; 2\pi)$$

$$3(1 - 2\sin^2 x) + 10(1 - \sin^2 x) - 24\sin x + 3 = 0$$

$$3 - \underline{6\sin^2 x} + 10 - \underline{10\sin^2 x} - \underline{24\sin x} + 3 = 0$$

$$-16\sin^2 x - 24\sin x + 16 = 0 \quad /:(-16)$$

$$\sin^2 x + \frac{3}{2}\sin x - 1 = 0$$

$$\left(\sin x + \frac{3}{4}\right)^2 - \frac{9}{16} - \frac{16}{16} = 0$$

$$\left(\sin x + \frac{3}{4}\right)^2 = \frac{25}{16} \quad /\sqrt{}$$

$$\left|\sin x + \frac{3}{4}\right| = \frac{5}{4}$$

$$\sin x = -\frac{3}{4} \mp \frac{5}{4}$$

$$\sin x = \frac{1}{2} \quad \vee \quad \sin x = -2 \notin \langle -1; 1\rangle$$

sprzeczne

dla $k \in C$

$$x = \frac{\pi}{6} + 2k\pi \quad \vee \quad x = \pi - \frac{\pi}{6} + 2k\pi$$

$$x = \left\{ \frac{\pi}{6} + 2k\pi \,;\, \frac{5\pi}{6} + 2k\pi \right\} \wedge k \in C$$

dla $x \in \langle 0; 2\pi \rangle$

Odp:
$$\underline{\underline{x = \left\{ \frac{\pi}{6} \,;\, \frac{5\pi}{6} \right\}.}}$$

Zad. 10 <5pkt.>

(3) $(a_1, a_2, a_3) \rightarrow a_n = a_1 q^{n-1}$

(2) $a_1 + a_2 + a_3 = \frac{21}{4}$

$b_n = b_1 + (n-1)\cdot r$

$b_n \uparrow \Rightarrow r > 0$

(1) $b_4 = a_1$

$b_2 = a_2 = a_1 q$

$b_1 = a_3 = a_1 q^2$

$a_1 = ?$

I METODA:

(1) $\begin{cases} a_1 = a_3 + 3r \\ a_2 = a_3 + r \end{cases} \rightarrow \boxed{a_3 = a_1 - 3r}$

$a_1 - a_2 = 2r$

$\boxed{a_2 = a_1 - 2r}$

(2)

$a_1 + (a_1 - 2r) + (a_1 - 3r) = \frac{21}{4}$

$\boxed{3a_1 - 5r = \frac{21}{4}}$

(3) $a_2^2 = a_1 \cdot a_3$

$(a_1 - 2r)^2 = a_1 \cdot (a_1 - 3r)$

$\cancel{a_1^2} - 4a_1 r + 4r^2 = \cancel{a_1^2} - 3a_1 r \quad /: r \neq 0$ (bo $b_n \uparrow$)

$-4a_1 + 4r = -3a_1$

$4r = a_1 \quad /:4$

$\boxed{r = \frac{1}{4} a_1}$

(4)

$3a_1 - 5 \cdot \frac{1}{4} a_1 = \frac{21}{4} \quad / \cdot 4$

$12a_1 - 5a_1 = 21$

$7a_1 = 21 \quad /:7$

Odp: $\underline{a_1 = 3}$

Zad. 10 <5 pkt.>

(1) $(a_1, a_2, a_3) \rightarrow a_n = a_1 q^{n-1}$

(2) $a_1 + a_2 + a_3 = \frac{21}{4}$

$b_n = b_1 + (n-1) \cdot r$

$b_n \uparrow \Rightarrow r > 0$

(3) $b_4 = a_1$

$b_2 = a_2 = a_1 q$

$b_1 = a_3 = a_1 q^2$

$a_1 = ?$

II METODA:

(1) $a_2 = a_1 q$

$a_3 = a_1 q^2$

(3) $\begin{cases} a_3 + 3r = a_1 \\ a_3 + r = a_2 \end{cases}$

$\begin{cases} a_1 q^2 + 3r = a_1 \\ a_1 q^2 + r = a_1 q \end{cases}$

$\begin{cases} a_1 q^2 + 3r = a_1 \\ \underline{r = a_1 q - a_1 q^2} \end{cases}$

(2) $a_1 + a_1 q + a_1 q^2 = \frac{21}{4}$

$a_1 \cdot (1 + q + q^2) = \frac{21}{4}$

$\boxed{a_1 = \frac{21}{4(1+q+q^2)}}$

$a_1 q^2 + 3(a_1 q - a_1 q^2) \quad a_1$

$\underline{a_1 q^2} + 3a_1 q - \underline{3a_1 q^2} - a_1 = 0$

$-a_1 + 3a_1 q - 2a_1 q^2 = 0$

$-a_1(1 - 3q + 2q^2) = 0$

$\underbrace{a_1 = 0}$ v $2q^2 - 3q + 1 = 0$

sprzeczne z (2)

$\Delta_q = 9 - 4 \cdot 2 \cdot 1 = 1$

$\underline{\underline{q}} = \frac{3-1}{2 \cdot 2} = \frac{2}{4} = \underline{\underline{\frac{1}{2}}}$ v $q = \frac{3+1}{4} = \frac{4}{4} = 1$

sprzeczne dla $b_n \uparrow$

(4) dla $q = \frac{1}{2}$:

$a_1 = \frac{21}{4(1 + \frac{1}{2} + \frac{1}{4})} = \frac{21}{\cancel{4} \cdot \frac{7}{\cancel{4}}} = \frac{21}{7} = 3$

Odp: $\underline{\underline{a_1 = 3}}$

Zad. 11 < 4 pkt.>

$$x^2-(3m+2)x+2m^2+7m-15=0 \qquad m=?$$

$$\begin{cases} x_1 \neq x_2 \Rightarrow \Delta_x > 0 & (1) \\ 2x_1^2+5x_1x_2+2x_2^2=2 & (2) \end{cases}$$

(1) $(3m+2)^2-4\cdot 1\cdot(2m^2+7m-15)>0$

$$9m^2+12m+4-8m^2-28m+60>0$$

$$m^2-16m+64>0$$

$$(m-8)^2>0 \Rightarrow Z_1: \ m\in\mathbb{R}-\{8\}$$

(2) $2x_1^2+5x_1x_2+2x_2^2=2$

$$2(x_1+x_2)^2+x_1x_2=2$$

$$2\cdot\left(\frac{3m+2}{1}\right)^2+\frac{2m^2+7m-15}{1}=2$$

$$2(9m^2+12m+4)+2m^2+7m-15=2$$

$$18m^2+24m+8+2m^2+7m-17=0$$

$$20m^2+31m-9=0$$

$$\Delta_m=31^2-4\cdot 20\cdot(-9)=1681=41^2$$

$$m_1=\frac{-31-41}{2\cdot 20}=\frac{-72}{40}=-1\frac{4}{5}=-1{,}8$$

$$m_2=\frac{-31+41}{2\cdot 20}=\frac{10}{40}=\frac{1}{4}=0{,}25$$

$$Z_2: \ m=\left\{-1\tfrac{4}{5};\ \tfrac{1}{4}\right\}$$

(3) $Z=Z_1\cap Z_2: \quad m=\left\{-1\tfrac{4}{5};\ \tfrac{1}{4}\right\}$

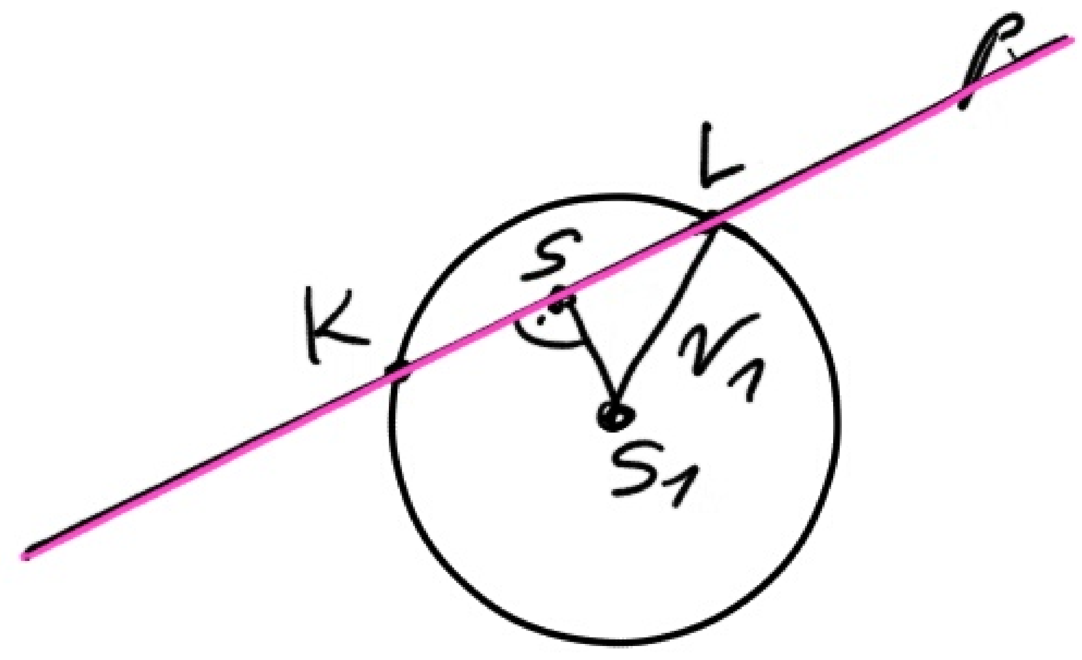
Zad. 12. < 5 pkt. >

$p: \ x+y-10=0$

$O_1: \ x^2+y^2-8x-6y+8=0$

$|S_1K| = |S_1L|$

$O_1(S_1, r_1) \xrightarrow{J_S^{k=-3}} O_2(S_2; r_2)$



$O_2 = ?$

(1) $O_1: \ (x-4)^2+(y-3)^2 = -8+16+9$

$O_1: \ (x-4)^2+(y-3)^2 = 17 \quad \Rightarrow \quad \begin{cases} S_1 = (4;3) \\ r_1 = \sqrt{17} \end{cases}$

(2)

$p: \begin{cases} y = 10-x \\ (x-4)^2+(y-3)^2 = 17 \end{cases}$ (O_1)

$(x-4)^2+(10-x-3)^2 = 17$

$(x-4)^2+(-x+7)^2 = 17$

$x^2-8x+16+x^2-14x+49 = 17$

$2x^2-22x+48 = 0 \quad /:2$

$x^2-11x+24 = 0$

$(x-8)(x-3) = 0$

$\begin{cases} x=8 \\ y=2 \end{cases} \vee \begin{cases} x=3 \\ y=7 \end{cases}$

$\boxed{K=(8;2) \quad L=(3;7)} \Rightarrow \boxed{S=\left(\frac{11}{2};\frac{9}{2}\right)}$

(3) $k=-3$

$\Downarrow$

$\boxed{r_2 = 3\sqrt{17}}$

(4)

$\overrightarrow{SS_2} = k \cdot \overrightarrow{SS_1}$

$\left[x_2-\frac{11}{2}; y_2-\frac{9}{2}\right] = -3\left[-\frac{3}{2}; -\frac{3}{2}\right]$

$x_2 = \frac{9}{2}+\frac{11}{2} = 10$

$y_2 = \frac{9}{2}+\frac{9}{2} = 9$

$S_2 = (10;9)$

(5) $O_2: \ (x-10)^2+(y-9)^2 = (3\sqrt{17})^2$

$O_2: \ (x-10)^2+(y-9)^2 = 153$

odp.

Zad. 13 <4 pkt.>

$Z = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$n = 10$ $\wedge$ ki, P $\Rightarrow \overline{\overline{\Omega}} = n^k$

$k = 7$

$\overline{\overline{A}} = ?$

A – l. 7 cyfrowe w których zapisie są dokładnie trzy jedynki i dwie dwójki.

Przypadek gdy „2" i „1" nie są pierwszą cyfrą

$$\overline{\overline{A_1}} = \frac{7}{\cancel{0}\ \cancel{2}\ \cancel{1}}\ \frac{8}{\cancel{2}\ \cancel{1}}\ \frac{1}{2}\ \frac{1}{2}\ \frac{1}{1}\ \frac{1}{1}\ \frac{1}{1} \times \binom{6}{3}\binom{3}{2} = 7 \cdot 8 \cdot 60 = \underline{\underline{3360}}$$

ROZMIESZCZAMY „2" i „1";

$$\binom{6}{3} \cdot \binom{3}{2} = \frac{6!}{3! \cdot 3!} \cdot 3 = \frac{4 \cdot 5 \cdot \cancel{6}}{\cancel{6}} \cdot 3 = 60$$

Przypadek, gdy „2" jest pierwszą cyfrą

$$\overline{\overline{A_2}} = \frac{1}{2}\ \frac{8}{\cancel{2}\ \cancel{1}}\ \frac{8}{\cancel{2}\ \cancel{1}}\ \frac{1}{2}\ \frac{1}{1}\ \frac{1}{1}\ \frac{1}{1} \times \binom{6}{3}\binom{3}{1} = 8 \cdot 8 \cdot 60 = \underline{\underline{3840}}$$

$$\binom{6}{3}\binom{3}{1} = \frac{4 \cdot 5 \cdot 6}{6} \cdot 3 = 60$$

Przypadek, gdy „1" jest pierwszą cyfrą

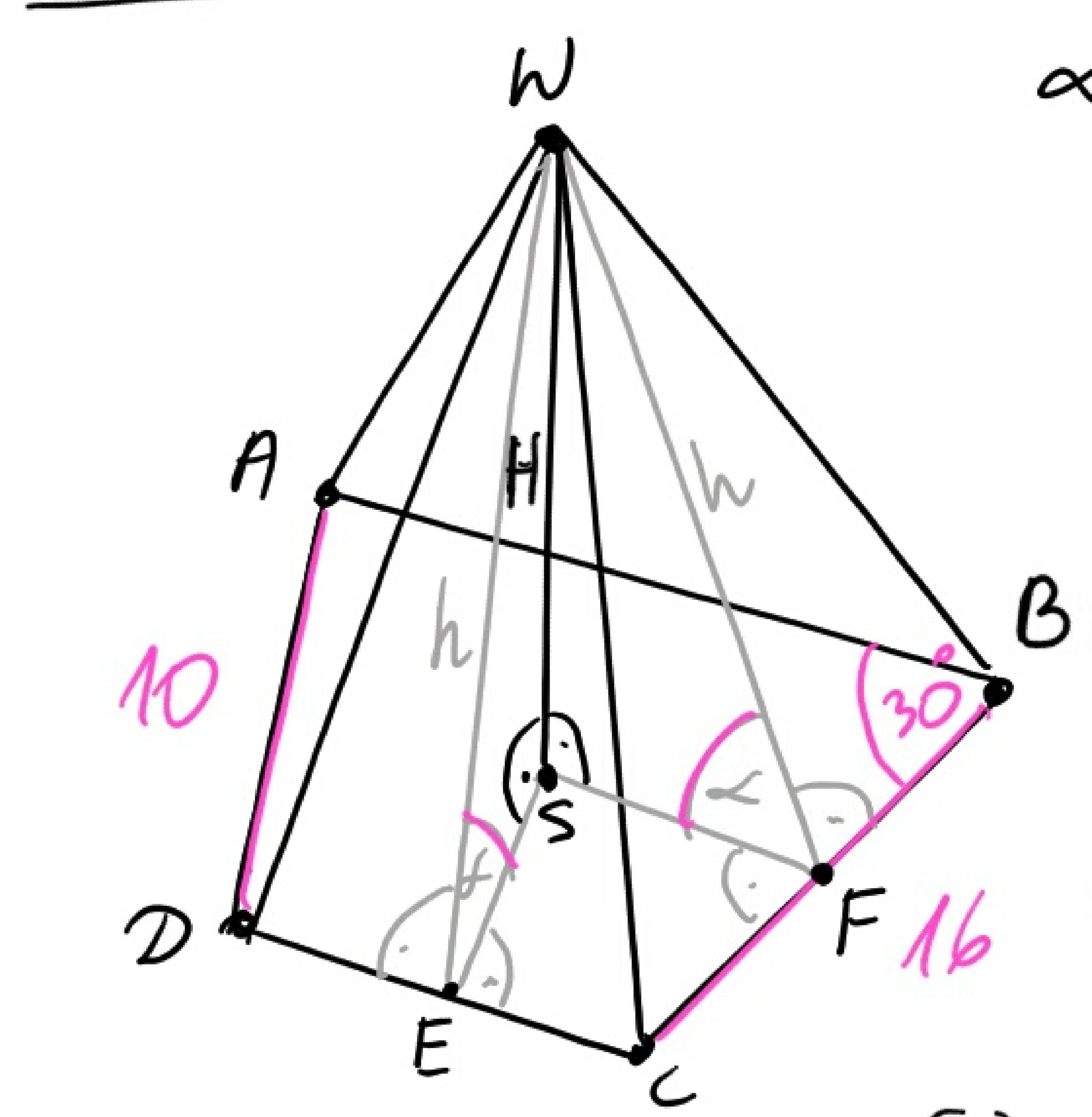
$$\overline{\overline{A_3}} = \frac{1}{1}\ \frac{8}{\cancel{2}\ \cancel{1}}\ \frac{8}{\cancel{2}\ \cancel{1}}\ \frac{1}{2}\ \frac{1}{2}\ \frac{1}{1}\ \frac{1}{1} \times \binom{6}{2}\binom{4}{2} = 8 \cdot 8 \cdot 90 = \underline{\underline{5760}}$$

$$\binom{6}{2}\binom{4}{2} = \frac{6!}{2! \cdot 4!} \cdot \frac{4!}{2! \cdot 2!} = \frac{5 \cdot 6}{\cancel{2}} \cdot \frac{3 \cdot \cancel{4}}{\cancel{2}} = 90$$

$$\overline{\overline{A}} = \overline{\overline{A_1}} + \overline{\overline{A_2}} + \overline{\overline{A_3}} = 3360 + 3840 + 5760$$

Odp: $\underline{\underline{\overline{\overline{A}} = 12960}}$

Zad. 19 <6pkt>



α - kąt nachylenia ścian ostrosłupa do pł. podstawy

$\overline{DC} \parallel \overline{AB}$

$|AD| = 10$

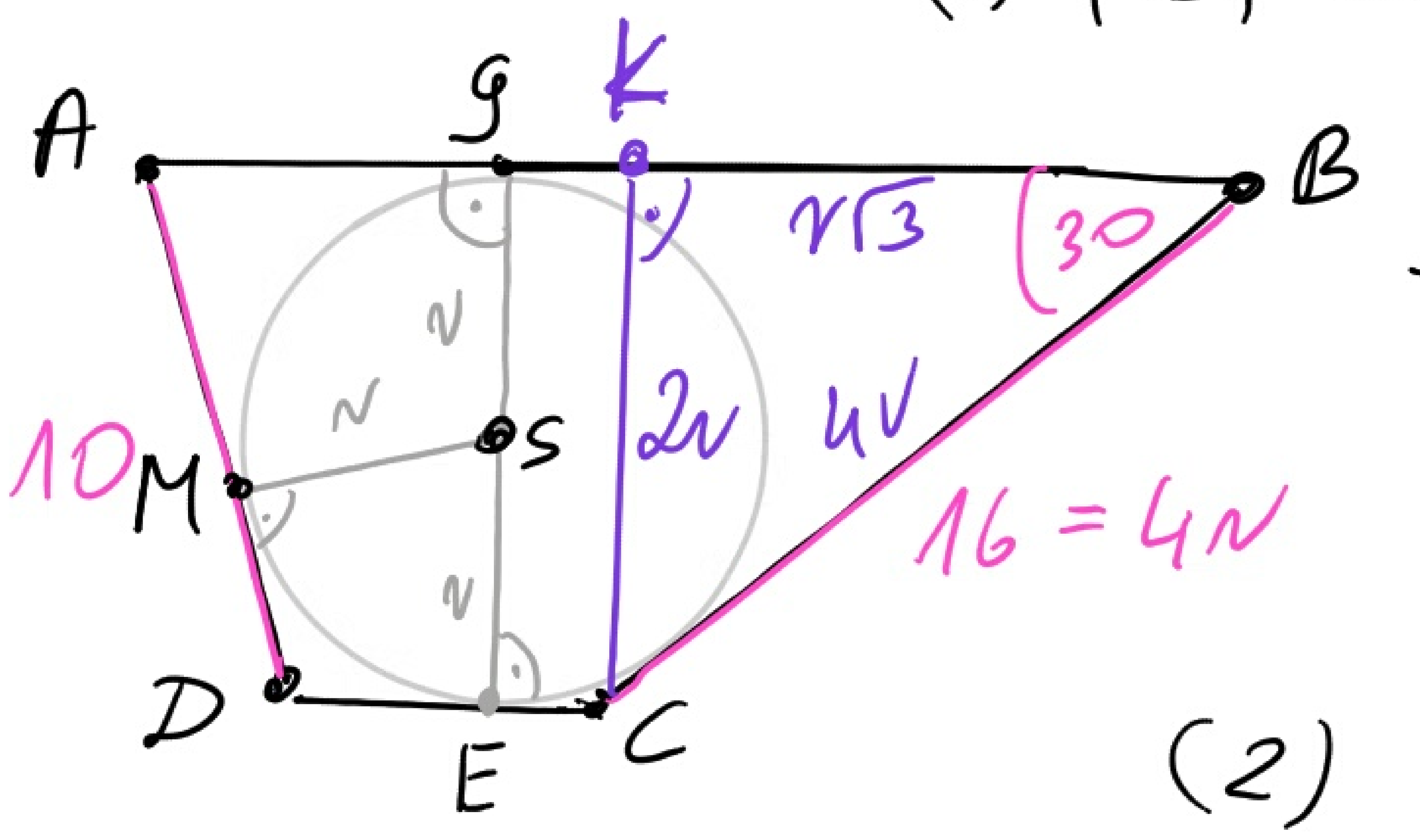
$|BC| = 16$

(3) $tg\,\alpha = \frac{9}{2}$

$V = ?$

(1) $|SE| = |SF| = |SG| = |SM| = r \;\wedge\; H = |SW|$

$h = |WE| = |WF|$



$\Delta CKB: 30^\circ, 60^\circ, 90^\circ$

$\Rightarrow 4r = 16$

$\boxed{r = 4}$

(2) CZWOROKĄT NA OKRĘGU

$|DC| + |AB| = |DA| + |BC| = 26$

$P_p = P_{ABCD} = \frac{26}{2} \cdot 2 \cdot 4 = 26 \cdot 4 = 104$

(3) ΔSFW:

$tg\,\alpha = \frac{9}{2} \Rightarrow \frac{|SW|}{|SF|} = \frac{9}{2} \Rightarrow \frac{H}{r} = \frac{9}{2} \Rightarrow H = \frac{9}{2} \cdot 4$

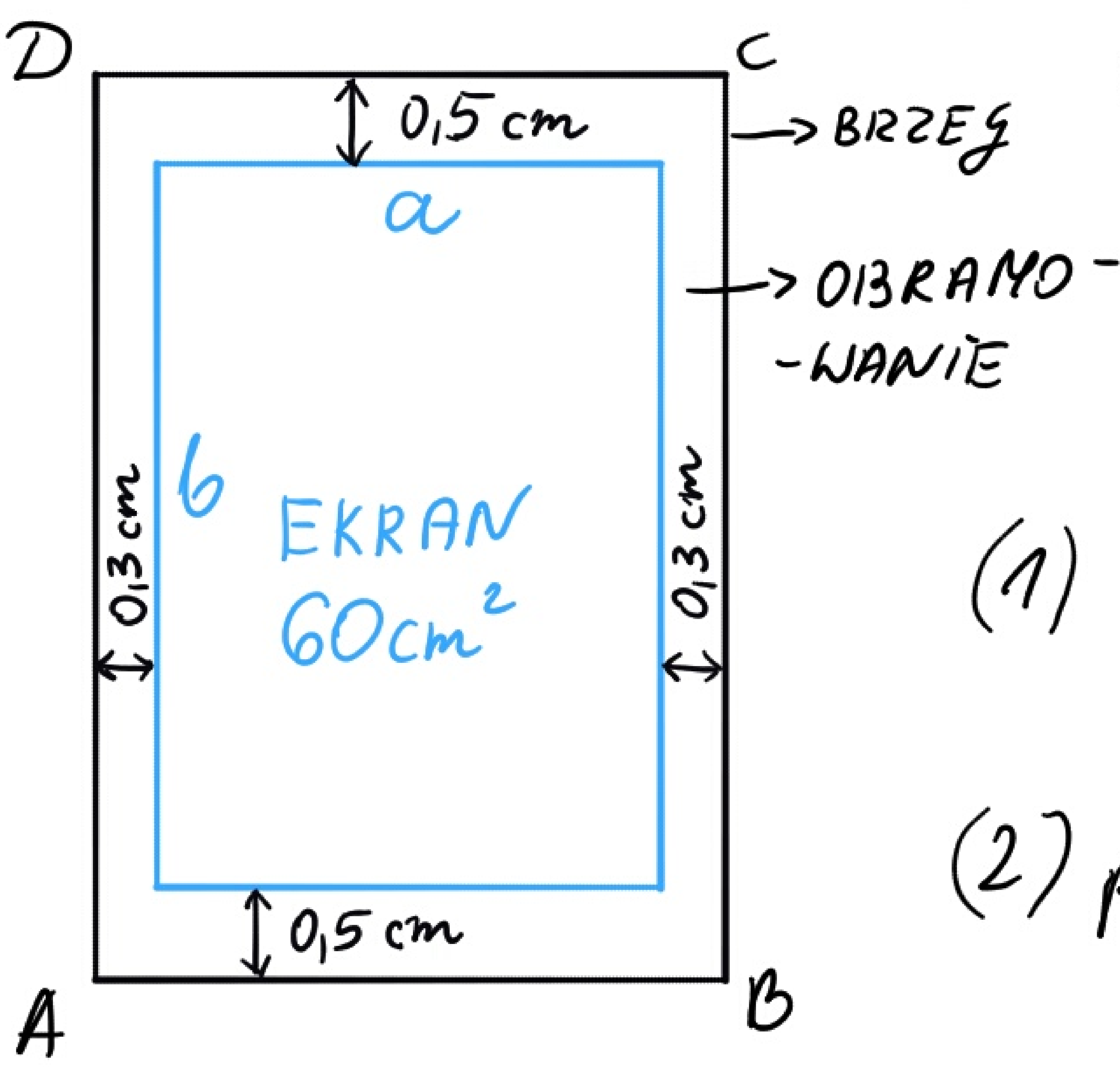
$H = 18$

(4) $V = \frac{1}{3} P_p \cdot H = \frac{1}{\cancel{3}} \cdot 104 \cdot \cancel{18}^{6} = 624$

Odp. Objętość ostrosłupa wynosi 624 $[j^3]$

Zad. 15 <7 pkt>

I Metoda:



(1) $a \cdot b = 60\,cm^3$

(3) $P=(a+0{,}6)(b+1)=min.$ | $a,b=?$

(1) $b = \frac{60}{a} \wedge a,b>0$

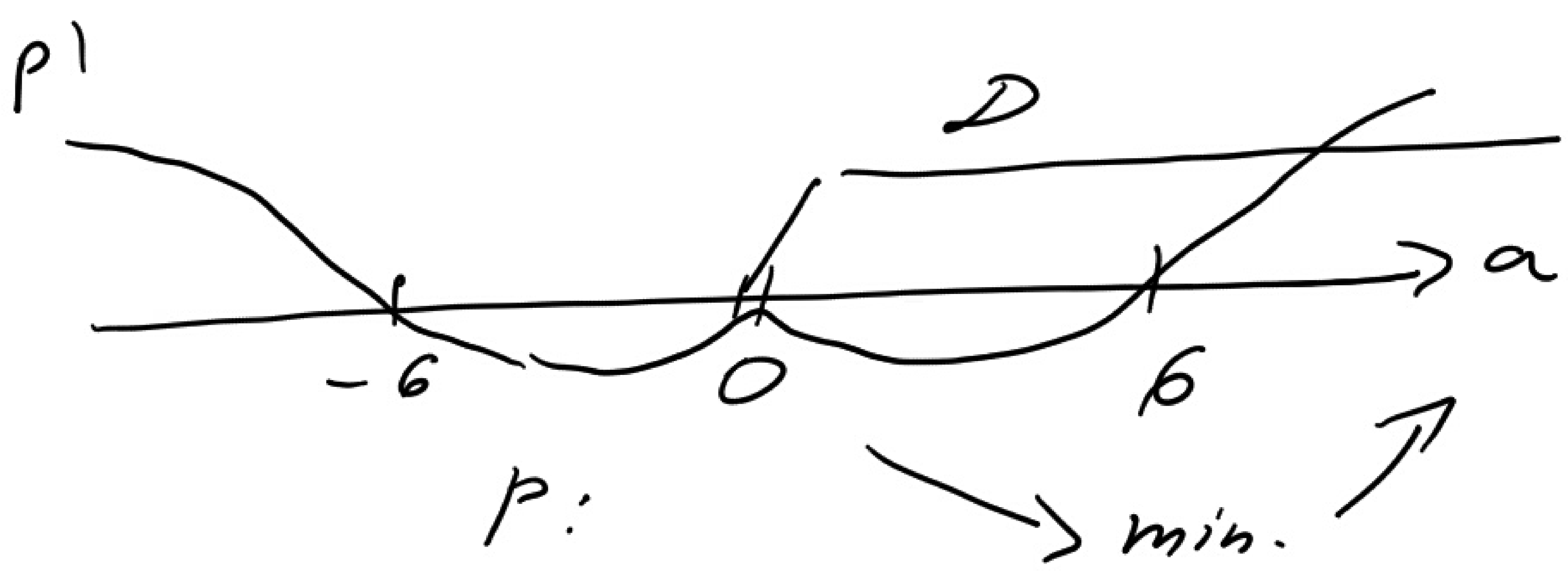
(2) $p = \left(a+\frac{3}{5}\right)\left(\frac{60}{a}+1\right)$

$p = 60 + a + \frac{36}{a} + \frac{3}{5}$

$P(a) = a + \frac{36}{a} + 60$ ∧ (3) $D: a \in (0;\infty)$

(4) $p'(a) = 1 - \frac{36}{a^2} = \frac{(a-6)(a+6)}{a^2} \wedge D'=D$

(5)



(6)
$p'(a)=0$ dla $a=6$
$p'(a)<0$ dla $a\in(0;6)$
$p'(a)>0$ dla $a\in(6;\infty)$

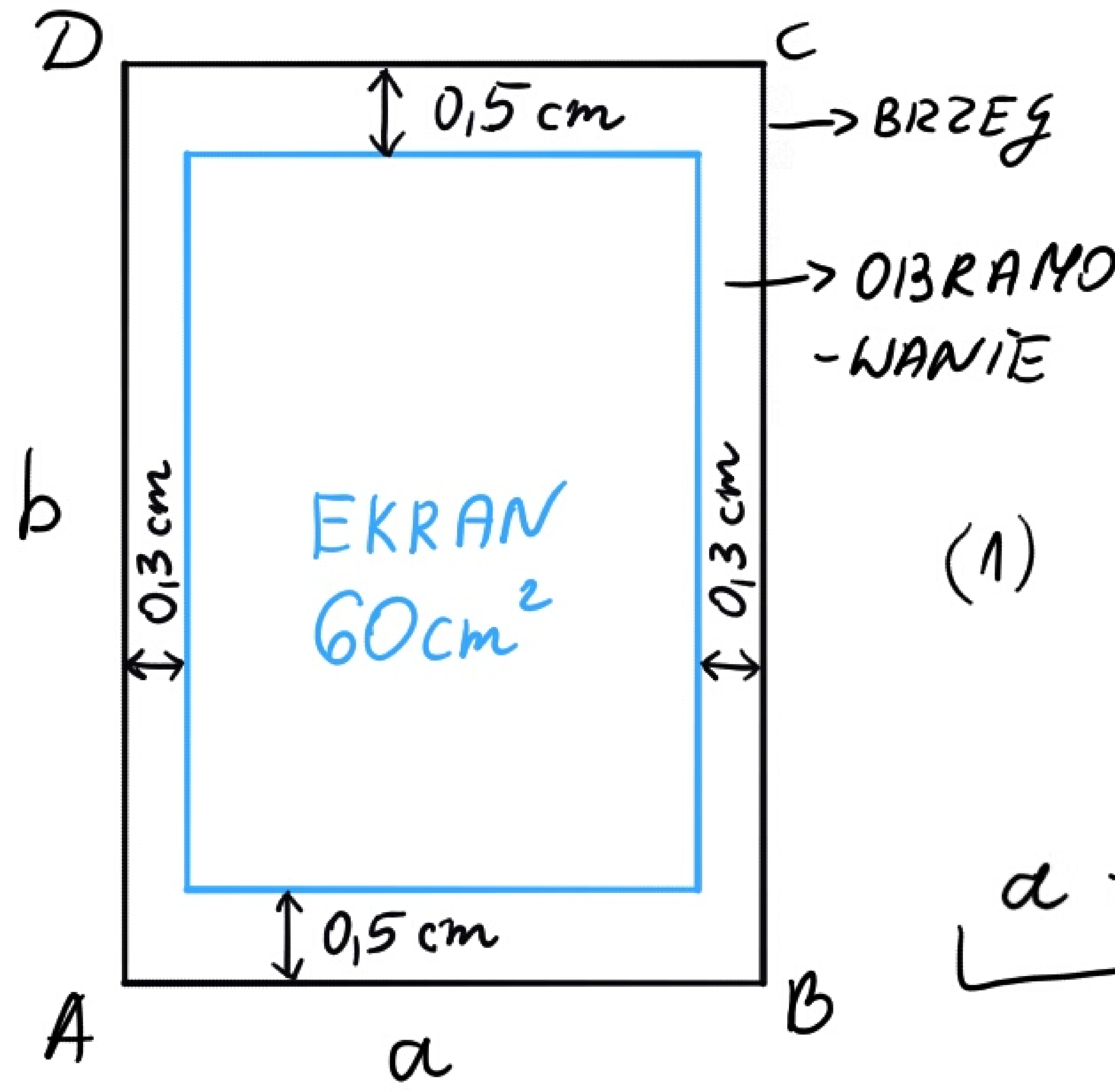
$\Downarrow$

DLA $a=6$ funkcja P osiąga minimum lok., które jest najmniejszą wartością P.

(7) $a=6 \rightarrow b = \frac{60}{6} = 10$

Odp: 6cm na 10 cm.

Zad. 15 <7 pkt.> II Metoda:



(1) $(b-1)(a-0{,}6)=60\,cm^2$

(3) $P=a\cdot b=\min$

$a-0{,}6=?$

$b-1=?$

(1) $(b-1)(a-0{,}6)=60 \;/ :(b-1)\neq 0$

$$a-0{,}6=\frac{60}{b-1}$$

$$\underbrace{a=\frac{60}{b-1}+\frac{3}{5}}=\frac{60\cdot 5+3(b-1)}{5(b-1)}$$

$$\underbrace{a}=\frac{3b+297}{5(b-1)}=\underbrace{\frac{3(b+99)}{5(b-1)}}$$

(2) Zał. $\begin{cases} a>0{,}6 \\ b>1 \end{cases} \Rightarrow \frac{3(b+99)}{5(b-1)}>\frac{3}{5} \;/ \cdot\frac{5}{3} \Rightarrow \frac{b+99}{b-1}>1 \Rightarrow$

$$\Rightarrow \frac{b+99-b+1}{b-1}>0 \Rightarrow \frac{100}{b-1}>0 \Rightarrow b>1$$

(3)

$$\underbrace{P(b)}=\frac{3b(b+99)}{5(b-1)}=\underbrace{\frac{3}{5}\cdot\frac{b^2+99b}{b-1}} \wedge \underbrace{D: b\in(1;\infty)}$$

(4) $$P'(b)=\frac{3}{5}\cdot\frac{(2b+99)\cdot(b-1)-(b^2+99b)\cdot 1}{(b-1)^2}=$$

$$=\frac{3}{5}\cdot\frac{2b^2-2b+\cancel{99b}-99-b^2-\cancel{99b}}{(b-1)^2}=$$

$$=\frac{3}{5}\cdot\frac{b^2-2b-99}{(b-1)^2}=\frac{3}{5}\cdot\frac{(b-1)^2-10^2}{(b-1)^2}$$

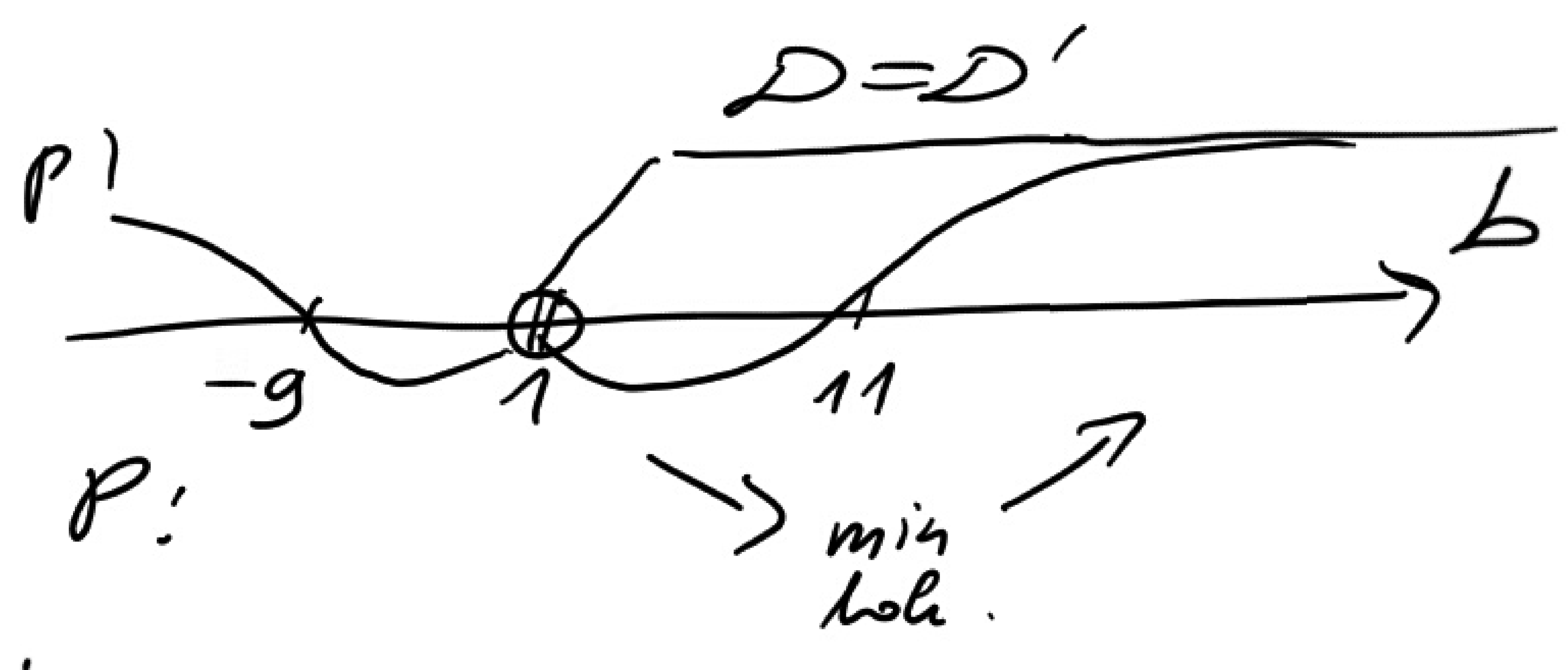
$$\underbrace{P'(b)=\frac{3}{5}\cdot\frac{(b-11)(b+9)}{(b-1)^2}} \wedge D'=(1;\infty)$$

(5)

$P'(b)=0$ dla $b=11$

$P'(b)<0$ dla $b\in(1;11)$

$P'(b)>0$ dla $b\in(11;151)$



(6) ⇓

dla $b=11$, P osiąga min. lokalne, które jest najmniejszą wartością P.

(7) $b=11$

$$a=\frac{3(11+99)}{5(11-1)}=\frac{330}{50}=6\tfrac{3}{5}=6{,}6$$

$a-0{,}6=6$ [cm]

$b-1=9$ [cm]

Odp: (6×9) [cm]