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II. A

1. Školství písoma práce

Body : $(30,5) = 29,0 + 1,5$

známka : (1)

1. a) $\overline{2834265} \pm 53000000 \pm \underline{5,3 \cdot 10^7}$ 2 platne \checkmark 3b
 b) $0,005 \overline{63442} \pm 0,005 \overline{63000} = \underline{5,63 \cdot 10^{-3}}$ 3 platne \checkmark 3b

2) $0,81; 2,39$ $3,2:2 = 1,6 \checkmark$ 4b
 $\bar{X} = 1,6 \pm 0,79$

3. a) $x = 5,342 \pm 0,034$
 $y = 2,364 \pm 0,036$ 1,5b
 $\bar{X} = 7,75 \overline{7} \pm 0,070 \leftarrow \text{musi sa písať}$

b.) $n = 5\ 230\ 000$ $5\ 230\ 000 - 350\ 000 = 4880\ 000$
 $n = 350\ 000$ $\bar{X} = 4880\ 000 \pm \underline{10\ 000}$ 2b
 $10000:2 = 5000$

4) $S' = S \left(1 + \frac{r}{100} \cdot \frac{n}{12}\right)$ $r.a. = 4\%$
 $n = S \left(\frac{n}{100} \cdot \frac{m}{12}\right) \checkmark$ $n.kladi = 2$
 $50 = S \left(\frac{41}{20} \cdot \frac{31}{12}\right) \checkmark$ $nisk. vrak = 50€ \checkmark$
 $50 = S \left(\frac{1}{20} \cdot \frac{1}{3}\right) \checkmark$ $jednoduch. vrak.$
 $50 = 5 \cdot 1 \cdot \frac{1}{20} \cdot 3 \checkmark$ $\text{od jan. do konc. maja.}$ 6b

$50 = S \left(\frac{1}{20} \cdot \frac{1}{3}\right) \checkmark$
 $50 = 5 \cdot 1 \cdot \frac{1}{20} \cdot 3 \checkmark$
 $S = 3000 \checkmark$ $n.kladi na ročníku januára$
 bol 3000€ \checkmark

5) $S = 2500€$ $S' = S \left(1 + \frac{r}{100} \cdot \frac{n}{12}\right)^4 \checkmark$ 6b
 $n = 4$ $\bar{X} = 2500 \cdot 1,08^4 \checkmark$
 $r.a. = 8\%$ $S' = 3401,22 \checkmark$
 vrak na konci n. $\text{suma vzrosla na 3401,22€ po 4 rokoch.}$

6) ~~período~~
 periódico \checkmark

$$D(f) = \langle -3, 5 \rangle \checkmark$$

$$H(f) = \langle 4, -2 \rangle \checkmark$$

maior \neq maior ~~maior~~ a^2 ?
 menor $=$ maior ~~menor~~ a^2

$$ax^2 + bx + c$$

7) $f: \mathbb{R} \rightarrow \mathbb{R} \quad f(x) = x^2 - 12x + 35$

$$D = b^2 - 4ac$$

$$D = 12^2 - 4 \cdot 1 \cdot 35$$

$$D = 144 - 140$$

$$D = 4$$

$$x_{1,2} = \frac{-b \pm \sqrt{D}}{2a}$$

$$x_1 = \frac{-12 + 2}{2} = -5$$

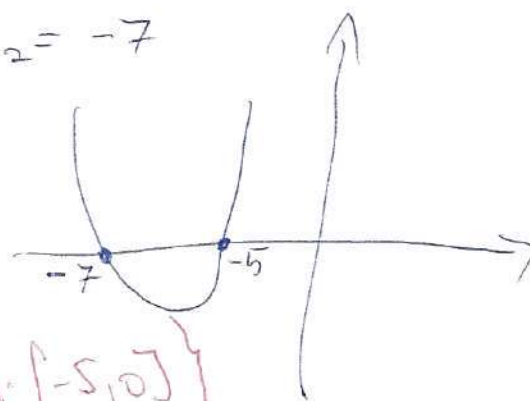
$$x_2 = \frac{-12 - 2}{2} = -7$$

$$f \cap \sigma_x = \{[-7, 5]\}$$



$$x_1 = -5$$

$$x_2 = -7$$



$$f \cap \sigma_x = \{[-7, 0], [-5, 0]\}$$

$$\text{Bônus: } 1,5b$$

$$29b + 1,5b = 30,5b \approx 32b \Rightarrow \textcircled{1} \checkmark$$