

Day 13

1-8

1, 2, 3-8 [day 12]

3agars 1

$$|x^2 - 5x| = 6$$

$$\begin{cases} x^2 - 5x = 6 \\ x^2 - 5x = -6 \end{cases}$$

①  $x^2 - 5x - 6 = 0$

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

$$D = 25 + 24 = 49$$

$$x = \frac{-b \pm \sqrt{D}}{2a}$$

$$x = \frac{5 \pm 7}{2}$$

$$x_1 = 6 \quad x_2 = -1$$

②  $x^2 - 5x + 6 = 0$

$$D = 25 - 4 \cdot 1 \cdot (-6)$$

$$D = 1$$

$$x = \frac{5 \pm 1}{2}$$

$$x_1 = 3$$

$$x_2 = 2$$

Answers: -1, 2, 3, 6.



Задача 2

$$|x| = x + 2$$

$$x + 2 \geq 0$$

$$x \geq -2$$

$$x \in [-2, +\infty)$$

$$x = 0$$

$$x = -2$$

$$\begin{cases} x = x + 2 \\ x = -(x + 2) \end{cases}$$

$$\textcircled{1} \quad x = x + 2$$

$$0x = 2$$

$\emptyset$

$$\textcircled{2} \quad x = -(x + 2)$$

$$x = -x - 2$$

$$2x = -2$$

$$x = -1$$

$$\begin{cases} x = -1 \\ x \in [-2, +\infty) \end{cases} \Rightarrow x = -1$$

Ответ:  $-1$ .