

1. Vypočítejte:

$$|-7 + |5 - 2|| + |3 - 11| - |5 - 3 \cdot |-5|| = |-7 + 3| + |-8| - |5 - 3 \cdot 5| = 4 + 8 - |-10| = 12 - 10 = \underline{2}$$

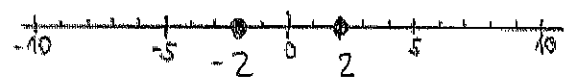
$$||-4|-5|-6| = ||4-5|-6| = |1-6| = \underline{5}$$

$$\left| \frac{3 - |2 + |-7||}{1 + |-5|} \right| = \left| \frac{3 - |2+7|}{1+5} \right| = \left| \frac{3-9}{6} \right| = |-1| = \underline{1}$$

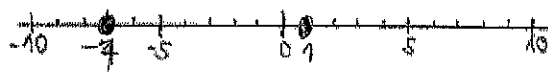
$$4 \cdot |-5 + 2| - |3 - 6| \cdot 2 = 4 \cdot 3 - 3 \cdot 2 = 12 - 6 = \underline{6}$$

2. Vyznačte na číselné ose všechna $x \in \mathbb{R}$, pro která platí

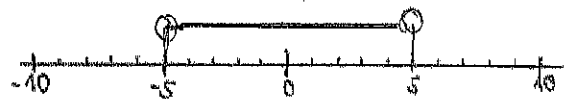
$$|x| = 2$$



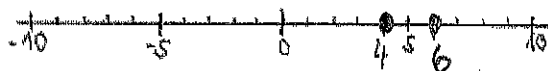
$$|x + 3| = 4 \quad x_0 = -3 \quad \begin{array}{l} -3 + 4 = -7 \\ -3 + 4 = 1 \end{array}$$



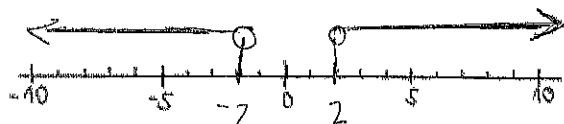
$$|x| < 5$$



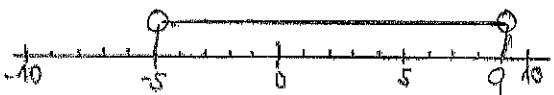
$$|x - 5| = 1 \quad x_0 = 5 \quad \begin{array}{l} 5 - 1 = 4 \\ 5 + 1 = 6 \end{array}$$



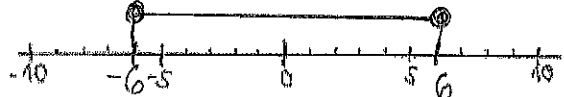
$$|x| > 2$$



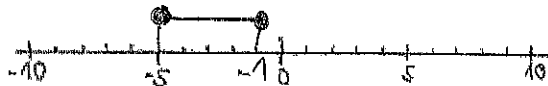
$$|x - 2| < 7 \quad x_0 = 2 \quad \begin{array}{l} 2 - 7 = -5 \\ 2 + 7 = 9 \end{array}$$



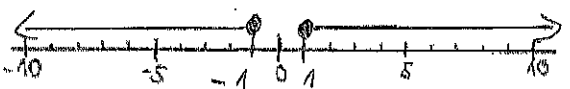
$$|x| \leq 6$$



$$|x + 3| \leq 2 \quad x_0 = -3 \quad \begin{array}{l} -3 - 2 = -5 \\ -3 + 2 = -1 \end{array}$$



$$|x| \geq 1$$



$$|x - 3| \geq 3 \quad x_0 = 3 \quad \begin{array}{l} 3 - 3 = 0 \\ 3 + 3 = 6 \end{array}$$



$$|x| \leq 0$$



$$|x + 4| > 5 \quad x_0 = -4 \quad \begin{array}{l} -4 - 5 = -9 \\ -4 + 5 = 1 \end{array}$$

