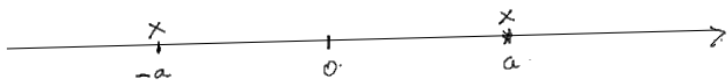


Equation avec Valeur absolue

$$\left(\begin{array}{l} |x| = a \\ a \geq 0 \end{array} \right) \Leftrightarrow x = a \quad \text{ou} \quad x = -a$$



• $|x - 6| = -1$ pas de solution

• $|5x + 6| = 2$

$$\Leftrightarrow 5x + 6 = 2 \quad \text{ou} \quad 5x + 6 = -2$$

$$\Leftrightarrow 5x = 2 + (-6) \quad \text{ou} \quad 5x = -2 + (-6)$$

$$\Leftrightarrow x = -\frac{4}{5} \quad \text{ou} \quad x = -\frac{8}{5}$$

• $2|1 - x| + 5 = 7$

$$\Leftrightarrow 2|1 - x| = 7 - 5 = 2$$

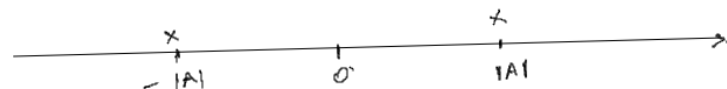
$$\Leftrightarrow |1 - x| = 1$$

$$\Leftrightarrow 1 - x = 1 \quad \text{ou} \quad 1 - x = -1$$

$$\Leftrightarrow -x = -1 + 1 \quad \text{ou} \quad -x = -1 - 1$$

$$\Leftrightarrow x = 0 \quad \text{ou} \quad x = 2$$

$$|x| = |A| \Leftrightarrow x = A \quad \text{ou} \quad x = -A$$



• $|3x| = |5x - 2|$

$$\Leftrightarrow 3x = 5x - 2 \quad \text{ou} \quad 3x = -(5x - 2) = -5x + 2$$

$$\Leftrightarrow 3x - 5x = -2 \quad \text{ou} \quad 3x + 5x = 2$$

$$\Leftrightarrow -2x = -2 \quad \text{ou} \quad 8x = 2$$

$$\Leftrightarrow x = 1 \quad \text{ou} \quad x = \frac{1}{4}$$

• $|3x| = 2|x - 1|$

$$= |2||x - 1| = |2(x - 1)|$$

$$\Leftrightarrow 3x = 2x - 2 \quad \text{ou} \quad 3x = -(2x - 2) = -2x + 2$$

$$\Leftrightarrow 3x - 2x = -2 \quad \text{ou} \quad 3x + 2x = 2$$

$$\Leftrightarrow x = -2 \quad \text{ou} \quad x = \frac{2}{5}$$