

Exercice 1 : Équations du premier degré

Résoudre les équations suivantes :

1. $3x - 7 = 11$

2. $13x - 9 = -10x - 4$

3. $-11x - 2 = -5x + 3$

$$\begin{aligned} 1. \quad 3x - 7 = 11 & \iff 3x - 7 + 7 = 11 + 7 \\ & \iff 3x = 18 \\ & \iff 3x \div 3 = 18 \div 3 \\ & \iff x = \frac{18}{3} \\ & \iff x = 6 \end{aligned}$$

La solution de l'équation $3x - 7 = 11$ est **6**.

$$\begin{aligned} 2. \quad 13x - 9 = -10x - 4 & \iff 13x - 9 + 10x = -10x - 4 + 10x \\ & \iff 23x - 9 = -4 \\ & \iff 23x - 9 + 9 = -4 + 9 \\ & \iff 23x = 5 \\ & \iff 23x \div 23 = 5 \div 23 \\ & \iff x = \frac{5}{23} \end{aligned}$$

La solution de l'équation $13x - 9 = -10x - 4$ est $\frac{5}{23}$.

$$\begin{aligned} 3. \quad -11x - 2 = -5x + 3 & \iff -11x - 2 + 5x = -5x + 3 + 5x \\ & \iff -6x - 2 = 3 \\ & \iff -6x - 2 + 2 = 3 + 2 \\ & \iff -6x = 5 \\ & \iff -6x \div (-6) = 5 \div (-6) \\ & \iff x = -\frac{5}{6} \end{aligned}$$

La solution de l'équation $-11x - 2 = -5x + 3$ est $-\frac{5}{6}$.