

## Exercice 1

$$\begin{aligned} \text{a)} \quad 2x - 5 &= 6 \\ 2x - 5 + 5 &= 6 + 5 \\ 2x &= 11 \\ \frac{2x}{2} &= \frac{11}{2} \\ x &= \frac{11}{2} \end{aligned}$$

$$\begin{aligned} \text{b)} \quad 2(x - 5) &= 6 \\ 2x - 10 &= 6 \\ 2x &= 6 + 10 \\ 2x &= 16 \\ x &= \frac{16}{2} \\ x &= 8 \end{aligned}$$

$$\begin{aligned} \text{c)} \quad 3(2x - 7) &= 0 \\ 6x - 21 &= 0 \\ 6x &= 21 \\ x &= \frac{21}{6} \\ x &= \frac{7}{2} \end{aligned}$$

$$\begin{aligned} \text{d)} \quad 4x^2 &= 100 \\ x^2 &= \frac{100}{4} \\ x^2 &= 25 \\ x &= 5 \text{ ou } x = -5 \end{aligned}$$

$$\begin{aligned} \text{Ex 2 1)} \quad 2 \\ 2 \times 3 &= 6 \\ 6 + 2 &= 8 \\ 8^2 &= 64 \\ 64 - 3^2 &= 64 - 9 = \boxed{55} \end{aligned}$$

$$\begin{array}{ll} 0 & -1 \\ 0 \times 3 = 0 & -1 \times 3 = -3 \\ 0 + 2 = 2 & -3 + 2 = -1 \\ 2^2 = 4 & (-1)^2 = 1 \\ 4 - 9 = \boxed{-5} & 1 - 9 = \boxed{-8} \end{array}$$

$$\begin{aligned} x \\ 3x \\ 3x + 2 \\ (3x + 2)^2 \\ (3x + 2)^2 - 9 \end{aligned}$$

$$\begin{aligned} \frac{4}{3} \\ \frac{4}{3} \times 3 &= 4 \\ 4 + 2 &= 6 \\ 6^2 &= 36 \\ 36 - 9 &= \boxed{27} \end{aligned}$$

2) On cherche  $x$  tel que :

$$\begin{aligned} (3x + 2)^2 - 9 &= 0 \\ (3x + 2)^2 &= 9 \end{aligned}$$

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

$$\begin{aligned} 3x &= 3 - 2 \\ 3x &= 1 \\ x &= \frac{1}{3} \end{aligned}$$

$$\begin{aligned} \text{ou } 3x &= -3 - 2 \\ 3x &= -5 \\ x &= \frac{-5}{3} \end{aligned}$$