

**Exercice 1**

Développer chacune des expressions littérales suivantes :

$$\begin{array}{l} A = (7x - 9) \times (7x + 9) \\ B = (x - 6) \times (6x + 1) \\ C = (9x + 6)^2 \end{array} \quad \left| \quad \begin{array}{l} D = (4x - 9)^2 \\ E = \left(\frac{1}{8}x + \frac{4}{3}\right) \times \left(\frac{4}{3}x - \frac{1}{8}\right) \\ F = -(2x - 5) \times (2x + 5) \end{array} \right.$$

**Exercice 2**

Développer chacune des expressions littérales suivantes :

$$\begin{array}{l} A = (8x + 1) \times (8x - 1) \\ B = (2x + 7)^2 \\ C = (4x - 3)^2 \end{array} \quad \left| \quad \begin{array}{l} D = (10x + 5) \times (5x - 10) \\ E = \left(\frac{7}{5}x + 9\right)^2 \\ F = -(4x - 10) \times (4x + 10) \end{array} \right.$$

**Corrigé de l'exercice 1**

Développer chacune des expressions littérales suivantes :

$$A = (7x - 9) \times (7x + 9)$$

$$A = (7x)^2 - 9^2$$

$$A = 49x^2 - 81$$

$$B = (x - 6) \times (6x + 1)$$

$$B = x \times 6x + x \times 1 - 6 \times 6x - 6 \times 1$$

$$B = 6x^2 + x - 36x - 6$$

$$B = 6x^2 + (1 - 36)x - 6$$

$$B = 6x^2 - 35x - 6$$

$$C = (9x + 6)^2$$

$$C = (9x)^2 + 2 \times 9x \times 6 + 6^2$$

$$C = 81x^2 + 108x + 36$$

$$D = (4x - 9)^2$$

$$D = (4x)^2 - 2 \times 4x \times 9 + 9^2$$

$$D = 16x^2 - 72x + 81$$

$$E = \left(\frac{1}{8}x + \frac{4}{3}\right) \times \left(\frac{4}{3}x - \frac{1}{8}\right)$$

$$E = \frac{1}{8}x \times \frac{4}{3}x + \frac{1}{8}x \times \left(-\frac{1}{8}\right) + \frac{4}{3} \times \frac{4}{3}x + \frac{4}{3} \times \left(-\frac{1}{8}\right)$$

$$E = \frac{1 \times 4}{6 \times 3}x^2 - \frac{1}{64}x + \frac{16}{9}x - \frac{1 \times 4}{6 \times 3}$$

$$E = \frac{1 \times 4}{6 \times 3}x^2 + \left(\frac{-1}{64} + \frac{16}{9}\right)x - \frac{1 \times 4}{6 \times 3}$$

$$E = \frac{1}{6}x^2 + \left(\frac{-1 \times 9}{64 \times 9} + \frac{16 \times 64}{9 \times 64}\right)x - \frac{1}{6}$$

$$E = \frac{1}{6}x^2 + \left(\frac{-9}{576} + \frac{1024}{576}\right)x - \frac{1}{6}$$

$$E = \frac{1}{6}x^2 + \frac{1015}{576}x - \frac{1}{6}$$

$$F = -(2x - 5) \times (2x + 5)$$

$$F = -((2x)^2 - 5^2)$$

$$F = -(4x^2 - 25)$$

$$F = -4x^2 + 25$$

**Corrigé de l'exercice 2**

Développer chacune des expressions littérales suivantes :

$$A = (8x + 1) \times (8x - 1)$$

$$A = (8x)^2 - 1^2$$

$$A = 64x^2 - 1$$

$$B = (2x + 7)^2$$

$$B = (2x)^2 + 2 \times 2x \times 7 + 7^2$$

$$B = 4x^2 + 28x + 49$$

$$C = (4x - 3)^2$$

$$C = (4x)^2 - 2 \times 4x \times 3 + 3^2$$

$$C = 16x^2 - 24x + 9$$

$$D = (10x + 5) \times (5x - 10)$$

$$D = 10x \times 5x + 10x \times (-10) + 5 \times 5x + 5 \times (-10)$$

$$D = 50x^2 - 100x + 25x - 50$$

$$D = 50x^2 + (-100 + 25)x - 50$$

$$D = 50x^2 - 75x - 50$$

$$E = \left(\frac{7}{5}x + 9\right)^2$$

$$E = \left(\frac{7}{5}x\right)^2 + 2 \times \frac{7}{5}x \times 9 + 9^2$$

$$E = \frac{49}{25}x^2 + \frac{126}{5}x + 81$$

$$F = -(4x - 10) \times (4x + 10)$$

$$F = -((4x)^2 - 10^2)$$

$$F = -(16x^2 - 100)$$

$$F = -16x^2 + 100$$