

**Exercice 1 :**

Calcule les expressions suivantes pour  $a = -2$  ;  $b = +3$  ;  $c = -1$  et  $d = +1$  :

$$A = a + b + c + d$$

$$B = a - b + c - d$$

$$C = -a + b - c - d ;$$

$$D = -(a + b) + (c + d)$$

$$E = -(a - b) - (c - d)$$

$$F = (a - b) + (c - d).$$

**Exercice 2 :**

Calculer les expressions suivantes pour  $a = +2$  ;  $b = -4$  ;  $c = -3$  et  $d = +1$  :

$$A = a + b + c + d$$

$$B = a - b + c - d$$

$$C = -a + b - c - d ;$$

$$D = -(a + b) + (c + d)$$

$$E = -(a - b) - (c - d)$$

$$F = (a - b) + (c - d).$$

## CORRIGE

**Exercice 1 :** a = -2 ; b = +3 ; c = -1 et d = +1.

$$\begin{aligned} A &= a + b + c + d \\ &= -2 + (+3) + (-1) + (+1) \\ &= -2 + 3 - 1 + 1 \\ &= -2 - 1 + 3 + 1 \\ &= -3 + 4 \\ &= 1 \end{aligned}$$

$$\begin{aligned} C &= -a + b - c - d \\ &= -(-2) + (+3) - (-1) - (+1) \\ &= +2 + 3 + 1 - 1 \\ &= 6 - 1 \\ &= 5 \end{aligned}$$

$$\begin{aligned} E &= -(a - b) - (c - d) \\ &= -((-2) - (+3)) - ((-1) - (+1)) \\ &= -(-2 - 3) - (-1 - 1) \\ &= -(-5) - (-2) \\ &= +5 + 2 \\ &= +7 \end{aligned}$$

$$\begin{aligned} B &= a - b + c - d \\ &= -2 - (+3) + (-1) - (+1) \\ &= -2 - 3 - 1 - 1 \\ &= -7 \end{aligned}$$

$$\begin{aligned} D &= -(a + b) + (c + d) \\ &= -((-2) + (+3)) + ((-1) + (+1)) \\ &= -(-2 + 3) + (-1 + 1) \\ &= -(+1) + (0) \\ &= -1 \end{aligned}$$

$$\begin{aligned} F &= (a - b) + (c - d) \\ &= ((-2) - (+3)) + ((-1) - (+1)) \\ &= (-2 - 3) + (-1 - 1) \\ &= (-5) + (-2) \\ &= -5 - 2 \\ &= -7 \end{aligned}$$

**Exercice 2 :** a = +2 ; b = -4 ; c = -3 et d = +1.

$$\begin{aligned} A &= a + b + c + d \\ &= (+2) + (-4) + (-3) + (+1) \\ &= 2 - 4 - 3 + 1 \\ &= -4 - 3 + 2 + 1 \\ &= -7 + 3 \\ &= -4 \end{aligned}$$

$$\begin{aligned} C &= -a + b - c - d \\ &= -(+2) + (-4) - (-3) - (+1) \\ &= -2 - 4 + 3 - 1 \\ &= -2 - 4 - 1 + 3 \\ &= -7 + 3 \\ &= -4 \end{aligned}$$

$$\begin{aligned} E &= -(a - b) - (c - d) \\ &= -((+2) - (-4)) - ((-3) - (+1)) \\ &= -(2 + 4) - (-3 - 1) \\ &= -6 - (-4) \\ &= -6 + 4 \\ &= -2 \end{aligned}$$

$$\begin{aligned} B &= a - b + c - d \\ &= (+2) - (-4) + (-3) - (+1) \\ &= 2 + 4 - 3 - 1 \\ &= 6 - 4 \\ &= 2 \end{aligned}$$

$$\begin{aligned} D &= -(a + b) + (c + d) \\ &= -((+2) + (-4)) + ((-3) + (+1)) \\ &= -(2 - 4) + (-3 + 1) \\ &= -(-2) + (-2) \\ &= +2 - 2 \\ &= 0 \end{aligned}$$

$$\begin{aligned} F &= (a - b) + (c - d) \\ &= ((+2) - (-4)) + ((-3) - (+1)) \\ &= (2 + 4) + (-3 - 1) \\ &= (+6) + (-4) \\ &= +6 - 4 \\ &= +2 \end{aligned}$$