

Correction du devoir n° 11 - 4ème

Ex1: Pour $x = -4$

$$\begin{aligned} \textcircled{A} &= x(x+7) \\ &= -4(-4+7) \\ &= -4 \times 3 \\ &= \textcircled{-12} \end{aligned}$$

$$\begin{aligned} \textcircled{B} &= 5(-3x-11) \\ &= 5(-3 \times (-4) - 11) \\ &= 5(12 - 11) \\ &= 5 \times 1 = \textcircled{5} \end{aligned}$$

$$\begin{aligned} \textcircled{C} &= 5x^2 + 20x + 2 \\ &= 5 \times (-4)^2 + 20 \times (-4) + 2 \\ &= 5 \times 16 - 80 + 2 \\ &= 80 - 80 + 2 = \textcircled{2} \end{aligned}$$

Ex2: $A = 8(5x-4)$
 $= 40x - 32$

$$\begin{aligned} B &= -6(-2x+3) \\ &= 12x - 18 \end{aligned}$$

$$\begin{aligned} C &= 7x(3x-2) - x(-6+x) \\ &= 21x^2 - 14x + 6x - x^2 \\ &= 20x^2 - 8x \end{aligned}$$

$$\begin{aligned} D &= (4x+8)(3x+5) \\ &= 12x^2 + 20x + 24x + 40 \\ &= 12x^2 + 44x + 40 \end{aligned}$$

$$\begin{aligned} E &= (8x-1)(3x+5) \\ &= 24x^2 + 30x - 3x - 5 \\ &= 24x^2 + 27x - 5 \end{aligned}$$

$$\begin{aligned} F &= (2t+3)\left(\frac{1}{2}t + \frac{1}{3}\right) \\ &= t^2 + \frac{2}{3}t + \frac{3}{2}t + 1 \\ &= t^2 + \frac{13}{6}t + 1 \end{aligned}$$

Ex3: $A = 5t - 25$
 $= 5(t-5)$

$$\begin{aligned} B &= 12 + 6x^2 \\ &= 6(2 + x^2) \end{aligned}$$

$$\begin{aligned} C &= 16y - 4 \\ &= 4(4y - 1) \end{aligned}$$

$$\begin{aligned} D &= -28a^2 + 42a \\ &= 14(-2a^2 + 3a) \\ &= 14a(-2a + 3) \end{aligned}$$

$$\begin{aligned} E &= 10x - 16x^2 \\ &= 2x(5 - 8x) \end{aligned}$$

$$\begin{aligned} F &= -6y^2 + 18y - 15 \\ &= 3(-2y^2 + 6y - 5) \end{aligned}$$

Ex4: 1) $\textcircled{S} = (2x-7)(5-x)$ pour $x=6$
 $= (12-7) \times (5-6)$
 $= 5 \times (-1) = \textcircled{-5}$

2) $\textcircled{S} = 10x - 2x^2 - 35 + 7x$
 $= -2x^2 + 17x - 35$

3) pour $x=6$
 $S = -2 \times 6^2 + 17 \times 6 - 35$
 $= -2 \times 36 + 102 - 35$
 $= -72 + 102 - 35$
 $= 30 - 35 = \textcircled{-5}$