2nde 9 **Correction de l'évaluation n°3**

Exercice n°1 : A = (3x - 2)(1- x).

B = -(3x - 2)(1 - x)	C = -(3x - 2)(x - 1)	D = -(2 - 3x)(x - 1)	E = (2 - 3x)(1 - x)
B = -A	$C = -(3x-2)\times(-(1-x))$	$D = -(-(3x-2))\times(-(1-x))$	$E= -(3x-2)\times(1-x)$
B = -A	C = A	D = -A	E = -A

Exercice n°2 : $(4x+3)^2=16x^2+24x+9$

Exercice n°3 : $g(x)=x-1-2(x-1)^2+4(x^2-1)$

a) $g(x)=x-1-2(x^2-2x+1)+4x^2-4$

$g(x) = x-1-2x^2+4x-2+4x^2-4$

$\boxed{g(x)=2x^2+5x-7}$

b) $g(x)=(x-1)-2(x-1)(x-1)+4(x-1)(x+1)$

$g(x)=(x-1)[1-2(x-1)+4(x+1)]$

$g(x)=(x-1)[1-2x+2+4x+4]$

Conclusion : $\boxed{g(x)=(x-1)(2x+7)}$.

c) $(x-1)(2x+7)=2x^2+7x-2x-7=2x^2+5x-7$. On retrouve bien la forme développée.

Exercice n° 4 : Forme 1 : $f(x)=(2x-1)^2-4$; **Forme 2** : f(x) = (2x-3)(2x+1) ; **Forme 3** : $f(x) = 4x^2 - 4x - 3$

1. $(2x-1)^2-4 = 4x^2-4x+1-4=4x^2-4x-3$: on retrouve bien la forme 3.

$(2x-3)(2x+1) = 4x^2+2x-6x-3 = 4x^2-4x-3$: on retrouve bien la forme 3.

2.a. $f(x) = -3 \Leftrightarrow 4x^2 - 4x - 3 = -3 \Leftrightarrow 4x^2 - 4x = 0 \Leftrightarrow 4x(x-1) = 0 \Leftrightarrow 4x = 0$ ou $(x-1) = 0 \Leftrightarrow x = 0$ ou $x = 1$

b. $f(x) = -4 \Leftrightarrow (2x-1)^2-4=-4 \Leftrightarrow (2x-1)^2=0 \Leftrightarrow (2x-1)=0 \Leftrightarrow x=\frac{1}{2}$

c. f(x) = 0. $f(x) = 0 \Leftrightarrow (2x-3)(2x+1) = 0 \Leftrightarrow (2x-3) = 0$ ou $(2x+1) = 0 \Leftrightarrow x=\frac{3}{2}$ ou $x=-\frac{1}{2}$.

Exercice n°5

1°) $A(x) = (2x-1)^2-(2x-3)(5x+2)-(x-3)(x+3)$

$A(x) = 4x^2-4x+1-(10x^2+4x-15x-6)-(x^2-9)$

$A(x) = 4x^2-4x+1-10x^2-4x+15x+6-x^2+9$

$\boxed{A(x) = -7x^2+7x+16}$

2°) B(x) = (x - 1)(3x+2) – (x – 1)(x+1)

B(x) = (x – 1) (3x+2 – x - 1)

$\boxed{B(x) = (x-1)(2x+1)}$

C(x) = (6 x + 4) – (x – 1) (3x+2)

C(x) = 2(3x+2) – (x-1) (3x+2)

C(x) = (3x+2)(2 – x +1)

$\boxed{C(x) =(3x+2)(3-x)}$

D(x) = (2x-3)(x +1) + (3-2x)(2 - x)

D(x) = (2x-3)(x +1) - (2x-3)(2 - x)

D(x) = (2x-3)(x +1- 2 + x)

$\boxed{D(x) = (2x-3)(2x-1)}$

$E(x) = (2-3x)(x-1)^2-(4-6x)(x-1)$

E(x) =(2 - 3x) (x - 1)(x-1) -2 (2 -3x)(x-1)

E(x) =(2 - 3x) (x - 1)[(x-1) -2]

$\boxed{E(x) = (2-3x)(x-1)(x-3)}$

$\boxed{F(x) = =(4-x)(4+x)}$

$G(x) = 9x^2 - 81$

$\boxed{G(x) = (3x-9)(3x+9)}$

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

$H(x) = 36(x-1)^2-(x-2)^2$

$H(x) = [6(x-1)]^2-(x-2)^2$

H(x) = [6(x-1)-(x-2)] [6(x-1)+(x-2)]

$\boxed{H(x) = (5x-4)(7x-8)}$

$I(x) = 4x^2+4x+1-(2x+1)(3x-1)$

$I(x) = (2x+1)^2-(2x+1)(3x-1)$

$I(x) = (2x+1)[(2x+1)-(3x-1)]$

$\boxed{I(x) = (2x+1)(-x+2)}$

$J(x) = 4x^2-25-(4x^2-20x+25)-2x+5$

$J(x) = (2x-5)(2x+5)-(2x-5)^2-(2x-5)$

J(x) =(2x-5)[(2x+5)-(2x-5)-1]

$\boxed{J(x) =9(2x-5)}$