

Niveau 3Exercice 3 p 19

$$J = (x-4)^2 - (2x-1)^2$$

$$\begin{aligned} J &= (x-4 + (2x-1))(x-4 - (2x-1)) \\ &= (3x-5)(-x-5) \end{aligned}$$

$$K = (7x+8)^2 - (3-5x)^2$$

$$\begin{aligned} &= (7x+8 + (3-5x))(7x+8 - (3-5x)) \\ &= (2x+17)(12x-1) \end{aligned}$$

F2 - Factorisation 1

$$\begin{aligned} A &= (-10x+6)^2 + (-5x+2)(-10x+6) \\ &= (-10x+6)(-10x+6) + (-5x+2)(-10x+6) \\ &= (-10x+6)(-10x+6 + (-5x+2)) \\ &= (-10x+6)(-15x+8) \end{aligned}$$

$$\begin{aligned} B &= 4 - (7x-7)^2 \\ &= 2^2 - (7x-7)^2 \\ &= (2+7x-7)(2-(7x-7)) \\ &= (7x-5)(-7x+5) \end{aligned}$$

$$\begin{aligned}
 C &= (-8x-1)(x-1) - (-8x-1) \\
 &= (-8x-1)(x-1-1) \\
 &= (-8x-1)(x-2)
 \end{aligned}$$

$$\begin{aligned}
 D &= 36x^2 - 36 \\
 &= (6x)^2 - 6^2 \\
 &= (6x+6)(6x-6)
 \end{aligned}$$

$$\begin{aligned}
 E &= (9x-8)(3x-10) + (-9x-2)(9x-8) \\
 &= (9x-8)(3x-10-9x-2) \\
 &= (9x-8)(-6x-12)
 \end{aligned}$$

$$\begin{aligned}
 F &= -(2x-4)(6x+2) + 4x^2 - 16 \\
 &= -(2x-4)(6x+2) + (2x+4)(2x-4) \\
 &= (2x-4)(-(6x+2) + 2x+4) \\
 &= (2x-4)(-6x-2+2x+4) \\
 &= (2x-4)(-4x+2)
 \end{aligned}$$

## F2 - Fact 2

$$\begin{aligned}
 A &= -(3x+5) + (3x-8)(3x+5) \\
 &= (3x+5)(-1+3x-8) \\
 &= (3x+5)(3x-9)
 \end{aligned}$$

$$\begin{aligned}
 B &= 100x^2 - 81 - (10x+9)(2x-10) \\
 &= (10x+9)(10x-9) - (10x+9)(2x-10)
 \end{aligned}$$

$$= (10x+9)(10x-9 - (2x-10))$$

$$= (10x+9)(8x+1)$$

$$C = 100x^2 - 36$$

$$= (10x+6)(10x-6)$$

$$D = 81 - (5x-1)^2$$

$$= 9^2 - (5x-1)^2$$

$$= (9+5x-1)(9-5x+1)$$

$$= (5x+8)(-5x+10)$$

$$E = (8x-3)(-7x-7) + (-7x-7)^2$$

$$= (8x-3)(-7x-7) + (-7x-7)(-7x-7)$$

$$= (-7x-7)(8x-3, -7x-7)$$

$$= (-7x-7)(x-10)$$

$$F = -(6x-10)(-6x+10) + (-6x+10)(x-10)$$

$$= (-6x+10)(-(6x-10) + x-10)$$

$$= (-6x+10)(-6x+10+x-10)$$

$$= (-6x+10)(-5x)$$