

Corrigé de l'exercice 1

Développer et réduire les expressions suivantes.

$$A = (3x + 5)(3x - 5)$$

$$A = (3x)^2 - 5^2$$

$$A = 9x^2 - 25$$

$$B = (3x - 10)^2$$

$$B = (3x)^2 - 2 \times 3x \times 10 + 10^2$$

$$B = 9x^2 - 60x + 100$$

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

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

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

$$D = (4x + 4)(8x + 6)$$

$$D = 32x^2 + 24x + 32x + 24$$

$$D = 32x^2 + 56x + 24$$

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

$$E = (2x)^2 + 2 \times 2x \times 1 + 1^2 + x^2 - 4^2$$

$$E = 4x^2 + 4x + 1 + x^2 - 16$$

$$E = 5x^2 + 4x - 15$$

$$F = -(x - 1)^2 + (2x + 10)(8x - 9)$$

$$F = -(x^2 - 2 \times x \times 1 + 1^2) + 16x^2 + (-18x) + 80x + (-90)$$

$$F = -(x^2 - 2x + 1) + 16x^2 + 62x - 90$$

$$F = -x^2 + 2x - 1 + 16x^2 + 62x - 90$$

$$F = 15x^2 + 64x - 91$$

Corrigé de l'exercice 2

Développer et réduire les expressions suivantes.

$$A = (8x + 5)^2$$

$$A = (8x)^2 + 2 \times 8x \times 5 + 5^2$$

$$A = 64x^2 + 80x + 25$$

$$B = (3x + 1)(3x - 1)$$

$$B = (3x)^2 - 1^2$$

$$B = 9x^2 - 1$$

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

$$C = (4x)^2 - 2 \times 4x \times 10 + 10^2$$

$$C = 16x^2 - 80x + 100$$

$$D = (6x + 9)(3x + 2)$$

$$D = 18x^2 + 12x + 27x + 18$$

$$D = 18x^2 + 39x + 18$$

$$E = (-x - 10)(-3x + 8) - (4x + 2)^2$$

$$E = 3x^2 + (-8x) + 30x + (-80) - ((4x)^2 + 2 \times 4x \times 2 + 2^2)$$

$$E = 3x^2 + 22x - 80 - (16x^2 + 16x + 4)$$

$$E = 3x^2 + 22x - 80 - 16x^2 - 16x - 4$$

$$E = -13x^2 + 6x - 84$$

$$F = -(10x - 2)^2 + (3x + 3)(3x - 3)$$

$$F = -((10x)^2 - 2 \times 10x \times 2 + 2^2) + (3x)^2 - 3^2$$

$$F = -(100x^2 - 40x + 4) + 9x^2 - 9$$

$$F = -100x^2 + 40x - 4 + 9x^2 - 9$$

$$F = -91x^2 + 40x - 13$$

Corrigé de l'exercice 3

Développer et réduire les expressions suivantes.

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

$$A = (8x)^2 - 2 \times 8x \times 8 + 8^2$$

$$A = 64x^2 - 128x + 64$$

$$B = (8x + 8)^2$$

$$B = (8x)^2 + 2 \times 8x \times 8 + 8^2$$

$$B = 64x^2 + 128x + 64$$

$$C = (-2x - 4)(8x + 1)$$

$$C = -16x^2 + (-2x) + (-32x) + (-4)$$

$$C = -16x^2 - 34x - 4$$

$$D = (4x + 10)(4x - 10)$$

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

$$D = 16x^2 - 100$$

$$E = -(-10x - 4)(7x + 2) - (9x - 7)^2$$

$$E = -(-70x^2 + (-20x) + (-28x) + (-8)) - ((9x)^2 - 2 \times 9x \times 7 + 7^2)$$

$$E = -(-70x^2 - 48x - 8) - (81x^2 - 126x + 49)$$

$$E = 70x^2 + 48x + 8 - 81x^2 + 126x - 49$$

$$E = -11x^2 + 174x - 41$$

$$F = (5x + 8)(5x - 8) + (2x + 4)^2$$

$$F = (5x)^2 - 8^2 + (2x)^2 + 2 \times 2x \times 4 + 4^2$$

$$F = 25x^2 - 64 + 4x^2 + 16x + 16$$

$$F = 29x^2 + 16x - 48$$

Corrigé de l'exercice 4

Factoriser les expressions suivantes.

$$A = (-10x + 5)(10x - 9) + 100x^2 - 81$$

$$A = (-10x + 5)(10x - 9) + (10x)^2 - 9^2$$

$$A = (-10x + 5)(10x - 9) + (10x - 9)(10x + 9)$$

$$A = (10x - 9)(-10x + 5 + 10x + 9)$$

$$A = (10x - 9) \times 14$$

$$B = -(-x - 9)(6x - 1) - (-x - 9)$$

$$B = -(-x - 9)(6x - 1) - (-x - 9) \times 1$$

$$B = (-x - 9)(-(6x - 1) - 1)$$

$$B = (-x - 9)(-6x + 1 - 1)$$

$$B = (-x - 9) \times (-6x)$$

$$C = (-7x - 4)^2 - 100$$

$$C = (-7x - 4)^2 - 10^2$$

$$C = (-7x - 4 + 10)(-7x - 4 - 10)$$

$$C =$$

Corrigé de l'exercice 5

Factoriser les expressions suivantes.

$$A = (4x - 8)(-7x - 9) + (4x - 8)^2$$

$$A = (4x - 8)(-7x - 9 + 4x - 8)$$

$$A = (4x - 8)(-3x - 17)$$

$$B = 64 - (-4x - 3)^2$$

$$B = 8^2 - (-4x - 3)^2$$

$$B = (8 - 4x - 3)(8 - (-4x - 3))$$

$$B = (8 - 4x - 3)(8 + 4x + 3)$$

$$B = (-4x + 5)(4x + 11)$$

$$C = 25x^2 - 16$$

$$C = (5x)^2 - 4^2$$

$$C = (5x + 4)(5x - 4)$$

$$D = 4x^2 - 49 + (2x + 7)(-9x - 1)$$

Corrigé de l'exercice 6

Factoriser les expressions suivantes.

$$C = (-7x + 6)(-7x - 14)$$

$$D = -(8x - 6)(6x - 8) + (6x - 8)^2$$

$$D = (6x - 8)(-(8x - 6) + 6x - 8)$$

$$D = (6x - 8)(-8x + 6 + 6x - 8)$$

$$D = (6x - 8)(-2x - 2)$$

$$E = -(6x - 9)(4x + 3) + (10x - 9)(4x + 3)$$

$$E = (4x + 3)(-(6x - 9) + 10x - 9)$$

$$E = (4x + 3)(-6x + 9 + 10x - 9)$$

$$E = (4x + 3) \times 4x$$

$$F = 81x^2 - 64$$

$$F = (9x)^2 - 8^2$$

$$F = (9x + 8)(9x - 8)$$

$$D = (2x)^2 - 7^2 + (2x + 7)(-9x - 1)$$

$$D = (2x + 7)(2x - 7) + (2x + 7)(-9x - 1)$$

$$D = (2x + 7)(2x - 7 - 9x - 1)$$

$$D = (2x + 7)(-7x - 8)$$

$$E = (5x - 2)(-10x + 9) - (5x - 2)$$

$$E = (5x - 2)(-10x + 9) - (5x - 2) \times 1$$

$$E = (5x - 2)(-10x + 9 - 1)$$

$$E = (5x - 2)(-10x + 8)$$

$$F = -(-2x - 7)(8x + 9) + (-7x - 7)(-2x - 7)$$

$$F = (-2x - 7)(-(8x + 9) - 7x - 7)$$

$$F = (-2x - 7)(-8x - 9 - 7x - 7)$$

$$F = (-2x - 7)(-15x - 16)$$

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

$$A = -(2x + 9)(10x + 2) + (2x + 9) \times 1$$

$$A = (2x + 9)(-(10x + 2) + 1)$$

$$A = (2x + 9)(-10x - 2 + 1)$$

$$A = (2x + 9)(-10x - 1)$$

$$B = (6x + 6)(5x + 10) + 36x^2 - 36$$

$$B = (6x + 6)(5x + 10) + (6x)^2 - 6^2$$

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

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

$$B = (6x + 6)(11x + 4)$$

$$C = -(-9x + 10)(-5x + 9) + (-9x + 10)^2$$

$$C = (-9x + 10)(-(-5x + 9) - 9x + 10)$$

$$C = (-9x + 10)(5x - 9 - 9x + 10)$$

$$C = (-9x + 10)(-4x + 1)$$

$$D = 9 - (-4x + 7)^2$$

$$D = 3^2 - (-4x + 7)^2$$

$$D = (3 - 4x + 7)(3 - (-4x + 7))$$

$$D = (3 - 4x + 7)(3 + 4x - 7)$$

$$D = (-4x + 10)(4x - 4)$$

$$E = (5x - 10)(-8x + 4) - (5x - 10)(8x - 3)$$

$$E = (5x - 10)(-8x + 4 - (8x - 3))$$

$$E = (5x - 10)(-8x + 4 - 8x + 3)$$

$$E = (5x - 10)(-16x + 7)$$

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

$$F = (6x)^2 - 10^2$$

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