

Groupe des Instituts Excel

Corrections

Corrigé de l'exercice 1

Factoriser les expressions suivantes.

$$A = (-10x - 8)^2 - 16$$

$$A = (-10x - 8)^2 - 4^2$$

$$A = (-10x - 8 + 4)(-10x - 8 - 4)$$

$$A =$$

$$A = (-10x - 4)(-10x - 12)$$

$$B = (3x + 6)(-7x + 9) + (-7x + 9)^2$$

$$B = (-7x + 9)(3x + 6 - 7x + 9)$$

$$B = (-7x + 9)(-4x + 15)$$

$$C = -(4x - 1)(-8x - 7) + (4x - 1)$$

$$C = -(4x - 1)(-8x - 7) + (4x - 1) \times 1$$

$$C = (4x - 1)(-(-8x - 7) + 1)$$

$$C = (4x - 1)(8x + 7 + 1)$$

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

Corrigé de l'exercice 2

Factoriser les expressions suivantes.

$$A = (-6x + 1)^2 - 25$$

$$A = (-6x + 1)^2 - 5^2$$

$$A = (-6x + 1 + 5)(-6x + 1 - 5)$$

$$A =$$

$$A = (-6x + 6)(-6x - 4)$$

$$B = (4x + 4)^2 + (7x - 7)(4x + 4)$$

$$B = (4x + 4)(4x + 4 + 7x - 7)$$

$$B = (4x + 4)(11x - 3)$$

$$C = 64x^2 - 9$$

$$C = (8x)^2 - 3^2$$

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

$$D = -(2x + 1) + (2x + 1)(-8x + 10)$$

$$D = -(-10x + 5)(8x + 7) + (-8x - 10)(-10x + 5)$$

$$D = (-10x + 5)(-(8x + 7) - 8x - 10)$$

$$D = (-10x + 5)(-8x - 7 - 8x - 10)$$

$$D = (-10x + 5)(-16x - 17)$$

$$E = 100x^2 - 100$$

$$E = (10x)^2 - 10^2$$

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

$$F = 25x^2 - 49 - (5x - 7)(6x + 1)$$

$$F = (5x)^2 - 7^2 - (5x - 7)(6x + 1)$$

$$F = (5x - 7)(5x + 7) - (5x - 7)(6x + 1)$$

$$F = (5x - 7)(5x + 7 - (6x + 1))$$

$$F = (5x - 7)(5x + 7 - 6x - 1)$$

$$F = (5x - 7)(-x + 6)$$

$$D = -(2x + 1) \times 1 + (2x + 1)(-8x + 10)$$

$$D = (2x + 1)(-1 - 8x + 10)$$

$$D = (2x + 1)(-8x + 9)$$

$$E = (7x + 3)(-2x - 7) - (2x - 6)(-2x - 7)$$

$$E = (-2x - 7)(7x + 3 - (2x - 6))$$

$$E = (-2x - 7)(7x + 3 - 2x + 6)$$

$$E = (-2x - 7)(5x + 9)$$

$$F = 100x^2 - 36 + (8x - 1)(10x + 6)$$

$$F = (10x)^2 - 6^2 + (8x - 1)(10x + 6)$$

$$F = (10x + 6)(10x - 6) + (8x - 1)(10x + 6)$$

$$F = (10x + 6)(10x - 6 + 8x - 1)$$

$$F = (10x + 6)(18x - 7)$$

Corrigé de l'exercice 3

Factoriser les expressions suivantes.

$$A = 16x^2 - 4$$

$$A = (4x)^2 - 2^2$$

$$A = (4x + 2)(4x - 2)$$

$$B = -(-4x - 4)(-2x + 7) + (-2x + 7)^2$$

$$B = (-2x + 7)(-(-4x - 4) - 2x + 7)$$

$$B = (-2x + 7)(4x + 4 - 2x + 7)$$

$$B = (-2x + 7)(2x + 11)$$

$$C = (7x + 10)^2 - 49$$

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

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

$$C =$$

$$C = (7x + 17)(7x + 3)$$

$$D = (9x + 10) - (-x - 1)(9x + 10)$$

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

Corrigé de l'exercice 4

Factoriser les expressions suivantes.

$$A = -(8x + 1)(-5x - 7) - (7x - 9)(8x + 1)$$

$$A = (8x + 1)(-(-5x - 7) - (7x - 9))$$

$$A = (8x + 1)(5x + 7 - 7x + 9)$$

$$A = (8x + 1)(-2x + 16)$$

$$B = (3x + 6)^2 - 4$$

$$B = (3x + 6)^2 - 2^2$$

$$B = (3x + 6 + 2)(3x + 6 - 2)$$

$$B =$$

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

$$C = -(-6x + 3)(4x + 9) + 16x^2 - 81$$

$$C = -(-6x + 3)(4x + 9) + (4x)^2 - 9^2$$

$$C = -(-6x + 3)(4x + 9) + (4x + 9)(4x - 9)$$

$$C = (4x + 9)(-(-6x + 3) + 4x - 9)$$

$$C = (4x + 9)(6x - 3 + 4x - 9)$$

$$D = (9x + 10)(1 - (-x - 1))$$

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

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

$$E = (x + 1)(4x - 2) - (5x - 7)(x + 1)$$

$$E = (x + 1)(4x - 2 - (5x - 7))$$

$$E = (x + 1)(4x - 2 - 5x + 7)$$

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

$$F = 100x^2 - 49 - (3x + 9)(10x + 7)$$

$$F = (10x)^2 - 7^2 - (3x + 9)(10x + 7)$$

$$F = (10x + 7)(10x - 7) - (3x + 9)(10x + 7)$$

$$F = (10x + 7)(10x - 7 - (3x + 9))$$

$$F = (10x + 7)(10x - 7 - 3x - 9)$$

$$F = (10x + 7)(7x - 16)$$

$$C = (4x + 9)(10x - 12)$$

$$D = 25x^2 - 64$$

$$D = (5x)^2 - 8^2$$

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

$$E = -(-2x - 4) + (-2x - 4)(-8x - 4)$$

$$E = -(-2x - 4) \times 1 + (-2x - 4)(-8x - 4)$$

$$E = (-2x - 4)(-1 - 8x - 4)$$

$$E = (-2x - 4)(-8x - 5)$$

$$F = -(9x + 3)(10x + 7) + (10x + 7)^2$$

$$F = (10x + 7)(-(9x + 3) + 10x + 7)$$

$$F = (10x + 7)(-9x - 3 + 10x + 7)$$

$$F = (10x + 7)(x + 4)$$

Corrigé de l'exercice 5

Factoriser les expressions suivantes.

$$A = (6x - 1)(7x + 7) + 36x^2 - 1$$

$$A = (6x - 1)(7x + 7) + (6x)^2 - 1^2$$

$$A = (6x - 1)(7x + 7) + (6x - 1)(6x + 1)$$

$$A = (6x - 1)(7x + 7 + 6x + 1)$$

$$A = (6x - 1)(13x + 8)$$

$$B = (6x + 4) + (6x + 4)(5x + 4)$$

$$B = (6x + 4) \times 1 + (6x + 4)(5x + 4)$$

$$B = (6x + 4)(1 + 5x + 4)$$

$$B = (6x + 4)(5x + 5)$$

$$C = x^2 - 81$$

$$C = x^2 - 9^2$$

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

$$D = (-2x + 3)(9x - 2) - (-10x - 7)(9x - 2)$$

Corrigé de l'exercice 6

Factoriser les expressions suivantes.

$$A = (6x - 3)^2 - 4$$

$$A = (6x - 3)^2 - 2^2$$

$$A = (6x - 3 + 2)(6x - 3 - 2)$$

$$A =$$

$$A = (6x - 1)(6x - 5)$$

$$B = 49x^2 - 100 - (7x + 10)(9x - 8)$$

$$B = (7x)^2 - 10^2 - (7x + 10)(9x - 8)$$

$$B = (7x + 10)(7x - 10) - (7x + 10)(9x - 8)$$

$$B = (7x + 10)(7x - 10 - (9x - 8))$$

$$B = (7x + 10)(7x - 10 - 9x + 8)$$

$$B = (7x + 10)(-2x - 2)$$

$$C = (7x - 1)(3x + 1) + (7x - 1)(3x - 5)$$

$$C = (7x - 1)(3x + 1 + 3x - 5)$$

$$D = (9x - 2)(-2x + 3 - (-10x - 7))$$

$$D = (9x - 2)(-2x + 3 + 10x + 7)$$

$$D = (9x - 2)(8x + 10)$$

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

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

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

$$E = (-4x + 6)(-8x + 3)$$

$$F = (-4x - 8)^2 - 25$$

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

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

$$F =$$

$$F = (-4x - 3)(-4x - 13)$$

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$$C = (7x - 1)(6x - 4)$$

$$D = -(-5x + 8) - (-5x - 6)(-5x + 8)$$

$$D = -(-5x + 8) \times 1 - (-5x - 6)(-5x + 8)$$

$$D = (-5x + 8)(-1 - (-5x - 6))$$

$$D = (-5x + 8)(-1 + 5x + 6)$$

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

$$E = 16x^2 - 9$$

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

$$E = (4x + 3)(4x - 3)$$

$$F = (x - 5)(-3x + 10) + (-3x + 10)^2$$

$$F = (-3x + 10)(x - 5 - 3x + 10)$$

$$F = (-3x + 10)(-2x + 5)$$