

**Exercice 1**

Factoriser les expressions suivantes.

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

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

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

$$D = 36x^2 - 36$$

$$E = (9x - 8)(3x - 10) + (-9x - 2)(9x - 8)$$

$$F = -(2x - 4)(6x + 2) + 4x^2 - 16$$

**Exercice 2**

Factoriser les expressions suivantes.

$$A = -(3x + 5) + (3x - 8)(3x + 5)$$

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

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

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

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

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

**Exercice 3**

Factoriser les expressions suivantes.

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

$$B = (9x - 7)(-10x + 1) + (-10x + 10)(-10x + 1)$$

$$C = 4x^2 - 36 - (2x + 6)(-3x - 9)$$

$$D = 49x^2 - 36$$

$$E = (10x - 7) - (10x - 6)(10x - 7)$$

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

**Exercice 4**

Factoriser les expressions suivantes.

$$A = x^2 - 36$$

$$B = (-8x + 9)(-7x + 6) - (x - 6)(-8x + 9)$$

$$C = -(7x + 4)(-5x + 9) + (-5x + 9)^2$$

$$D = 16 - (3x + 7)^2$$

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

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

**Exercice 5**

Factoriser les expressions suivantes.

$$A = -(-9x + 10)(4x - 3) - (4x - 3)$$

$$B = 64x^2 - 36$$

$$C = -(-8x + 8)(6x + 2) + (-8x + 8)(9x - 6)$$

$$D = (3x + 8)(-x + 4) + 9x^2 - 64$$

$$E = (-7x - 9)^2 - 49$$

$$F = (-9x + 1)^2 + (-9x + 1)(-5x + 7)$$

**Exercice 6**

Factoriser les expressions suivantes.

$$A = (-3x + 6)(2x - 1) + (-5x + 1)(-3x + 6)$$

$$B = (-x - 5)^2 - 25$$

$$C = -(-10x + 4)(-10x - 5) + (-10x - 5)$$

$$D = 81x^2 - 36$$

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

$$F = -(-10x - 4)(9x - 5) + 81x^2 - 25$$

**Corrigé de l'exercice 1**

Factoriser les expressions suivantes.

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

$$A = (-10x + 6)(-10x + 6 - 5x + 2)$$

$$A = (-10x + 6)(-15x + 8)$$

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

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

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

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

$$B = (7x - 5)(-7x + 9)$$

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

$$C = (-8x - 1)(x - 1) - (-8x - 1) \times 1$$

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

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

**Corrigé de l'exercice 2**

Factoriser les expressions suivantes.

$$A = -(3x + 5) + (3x - 8)(3x + 5)$$

$$A = -(3x + 5) \times 1 + (3x - 8)(3x + 5)$$

$$A = (3x + 5)(-1 + 3x - 8)$$

$$A = (3x + 5)(3x - 9)$$

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

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

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

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

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

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

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

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

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

**Corrigé de l'exercice 3**

Factoriser les expressions suivantes.

$$D = 36x^2 - 36$$

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

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

$$E = (9x - 8)(3x - 10) + (-9x - 2)(9x - 8)$$

$$E = (9x - 8)(3x - 10 - 9x - 2)$$

$$E = (9x - 8)(-6x - 12)$$

$$F = -(2x - 4)(6x + 2) + 4x^2 - 16$$

$$F = -(2x - 4)(6x + 2) + (2x)^2 - 4^2$$

$$F = -(2x - 4)(6x + 2) + (2x - 4)(2x + 4)$$

$$F = (2x - 4)(-(6x + 2) + 2x + 4)$$

$$F = (2x - 4)(-6x - 2 + 2x + 4)$$

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

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

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

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

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

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

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

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

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

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

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

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

$$F = (-6x + 10) \times (-5x)$$

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

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

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

$$A =$$

$$A = (-3x + 4)(-3x + 2)$$

$$B = (9x - 7)(-10x + 1) + (-10x + 10)(-10x + 1)$$

$$B = (-10x + 1)(9x - 7 - 10x + 10)$$

$$B = (-10x + 1)(-x + 3)$$

$$C = 4x^2 - 36 - (2x + 6)(-3x - 9)$$

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

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

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

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

$$C = (2x + 6)(5x + 3)$$

$$D = 49x^2 - 36$$

$$D = (7x)^2 - 6^2$$

$$D = (7x + 6)(7x - 6)$$

$$E = (10x - 7) - (10x - 6)(10x - 7)$$

$$E = (10x - 7) \times 1 - (10x - 6)(10x - 7)$$

$$E = (10x - 7)(1 - (10x - 6))$$

$$E = (10x - 7)(1 - 10x + 6)$$

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

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

$$F = (-2x - 10)(-2x - 10 + 9x - 4)$$

$$F = (-2x - 10)(7x - 14)$$

#### Corrigé de l'exercice 4

Factoriser les expressions suivantes.

$$A = x^2 - 36$$

$$A = x^2 - 6^2$$

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

$$B = (-8x + 9)(-7x + 6) - (x - 6)(-8x + 9)$$

$$B = (-8x + 9)(-7x + 6 - (x - 6))$$

$$B = (-8x + 9)(-7x + 6 - x + 6)$$

$$B = (-8x + 9)(-8x + 12)$$

$$C = -(7x + 4)(-5x + 9) + (-5x + 9)^2$$

$$C = (-5x + 9)(-(7x + 4) - 5x + 9)$$

$$C = (-5x + 9)(-7x - 4 - 5x + 9)$$

$$C = (-5x + 9)(-12x + 5)$$

$$D = 16 - (3x + 7)^2$$

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

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

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

$$D = (3x + 11)(-3x - 3)$$

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

$$E = -(6x - 4)(6x + 6) - (6x + 6) \times 1$$

$$E = (6x + 6)(-(6x - 4) - 1)$$

$$E = (6x + 6)(-6x + 4 - 1)$$

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

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

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

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

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

$$F = (6x + 1) \times 14x$$

#### Corrigé de l'exercice 5

Factoriser les expressions suivantes.

$$A = -(-9x + 10)(4x - 3) - (4x - 3)$$

$$A = -(-9x + 10)(4x - 3) - (4x - 3) \times 1$$

$$A = (4x - 3)(-(-9x + 10) - 1)$$

$$A = (4x - 3)(9x - 10 - 1)$$

$$A = (4x - 3)(9x - 11)$$

$$B = 64x^2 - 36$$

$$B = (8x)^2 - 6^2$$

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

$$C = -(-8x + 8)(6x + 2) + (-8x + 8)(9x - 6)$$

$$C = (-8x + 8)(-(6x + 2) + 9x - 6)$$

$$C = (-8x + 8)(-6x - 2 + 9x - 6)$$

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

$$D = (3x + 8)(-x + 4) + 9x^2 - 64$$

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

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

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

$$D = (3x + 8)(2x - 4)$$

$$E = (-7x - 9)^2 - 49$$

$$E = (-7x - 9)^2 - 7^2$$

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

$$E =$$

$$E = (-7x - 2)(-7x - 16)$$

$$F = (-9x + 1)^2 + (-9x + 1)(-5x + 7)$$

$$F = (-9x + 1)(-9x + 1 - 5x + 7)$$

$$F = (-9x + 1)(-14x + 8)$$

### Corrigé de l'exercice 6

Factoriser les expressions suivantes.

$$A = (-3x + 6)(2x - 1) + (-5x + 1)(-3x + 6)$$

$$A = (-3x + 6)(2x - 1 - 5x + 1)$$

$$A = (-3x + 6) \times (-3x)$$

$$B = (-x - 5)^2 - 25$$

$$B = (-x - 5)^2 - 5^2$$

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

$$B =$$

$$B = -x(-x - 10)$$

$$C = -(-10x + 4)(-10x - 5) + (-10x - 5)$$

$$C = -(-10x + 4)(-10x - 5) + (-10x - 5) \times 1$$

$$C = (-10x - 5)(-(-10x + 4) + 1)$$

$$C = (-10x - 5)(10x - 4 + 1)$$

$$C = (-10x - 5)(10x - 3)$$

$$D = 81x^2 - 36$$

$$D = (9x)^2 - 6^2$$

$$D = (9x - 6)(9x + 6)$$

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

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

$$E = (-4x - 2)(6x + 7)$$

$$F = -(-10x - 4)(9x - 5) + 81x^2 - 25$$

$$F = -(-10x - 4)(9x - 5) + (9x)^2 - 5^2$$

$$F = -(-10x - 4)(9x - 5) + (9x - 5)(9x + 5)$$

$$F = (9x - 5)(-(-10x - 4) + 9x + 5)$$

$$F = (9x - 5)(10x + 4 + 9x + 5)$$

$$F = (9x - 5)(19x + 9)$$