

Fiche d'exercices : Factorisation

Exercice 1 :

Mettre en évidence un facteur commun, le souligner, puis factoriser.

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

$$B = (x + 5)(4x - 2) - (x + 5)(9x + 1)$$

$$C = (3x + 8)^2 - (6x - 7)(3x + 8)$$

Exercice 2 : Mettre en évidence un facteur commun, puis factoriser.

$$A = 20 + 15y \quad B = 4t + 6 \quad C = 8 + 2n \quad D = 30a + 36a^2$$

Exercice 3 :

Factoriser en utilisant l'identité remarquable  $a^2 - b^2 = (a + b)(a - b)$ .

$$A = x^2 - 6^2 = (\dots + \dots)(\dots - \dots)$$

$$B = 9^2 - y^2 = (\dots + \dots)(\dots - \dots)$$

$$C = 16 - z^2 = \dots^2 - z^2 = (\dots + \dots)(\dots - \dots)$$

$$D = t^2 - 9 = \dots = \dots$$

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

$$F = 49 - 25y^2 = \dots = \dots$$

$$G = 25x^2 - 144 = \dots = \dots$$

$$H = a^2 - \frac{4}{9} = \dots = \dots$$

$$I = x^2 - 17 = \dots$$

$$J = 144t^2 - 53 = \dots$$

$$K = 36z^2 - 8 = \dots$$

Exercice 4 : Factoriser en utilisant une identité remarquable.

$$A = 31^2 - 29^2 = (\dots + \dots)(\dots - \dots) = \dots \times \dots = \dots$$

$$B = 102^2 - 98^2 = (\dots + \dots)(\dots - \dots) = \dots \times \dots = \dots$$

Exercice 5 : Reconnaître une identité remarquable et factoriser.

$$A = 49x^2 - 16$$

$$D = 25 - 100t^2$$

$$B = 9y^2 - 24y + 16$$

$$E = 36z^2 - 1$$

$$C = x^2 + 2x + 1$$

$$F = 64 - 80x + 25x^2$$

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