

# J'entre en Terminale – Correction exercice 05

Factoriser Niveau 2 - Consolidation

## Énoncé

Factoriser :

1.  $F = x^3 - 8$

2.  $G = (2x - 1)^2 - 9$

3.  $H = x^3 + 3x^2 + 3x + 1$

4.  $I = 16x^4 - 81$

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

6.  $K = x^3 - x^2 - x + 1$

7.  $L = 4(x + 1)^2 - 9(x - 1)^2$

## Correction détaillée

1.  $F = x^3 - 8 = (x - 2)(x^2 + 2x + 4)$ .

2.  $G = (2x - 1)^2 - 9 = (2x - 4)(2x + 2) = 4(x - 2)(x + 1)$ .

3.  $H = x^3 + 3x^2 + 3x + 1 = (x + 1)^3$ .

4.  $I = 16x^4 - 81 = (4x^2 - 9)(4x^2 + 9) = (2x - 3)(2x + 3)(4x^2 + 9)$ .

5.  $J = (x - 1)^2 - 4(x - 1) = (x - 1)(x - 5)$ .

6.  $K = x^3 - x^2 - x + 1 = (x - 1)^2(x + 1)$ .

7.  $L = [2(x + 1) - 3(x - 1)][2(x + 1) + 3(x - 1)] = (5 - x)(5x - 1)$ .