

# Factorisation IR

①

## Niveau 2

### Exercice 1 p13

$$\begin{aligned} A &= x^2 - 9 \\ &= x^2 - 3^2 \\ &= (x+3)(x-3) \end{aligned}$$

$$\begin{aligned} B &= 81 - t^2 \\ &= 9^2 - t^2 \\ &= (9+t)(9-t) \end{aligned}$$

$$\begin{aligned} C &= 16x^2 - 36 \\ &= (4x)^2 - 6^2 \\ &= (4x+6)(4x-6) \end{aligned}$$

$$\begin{aligned} D &= 25 - 4y^2 \\ &= 5^2 - (2y)^2 \\ &= (5+2y)(5-2y) \end{aligned}$$

### Exercice 2 p13

$$\begin{aligned} E &= (x+4)^2 - 64 \\ &= (x+4)^2 - 8^2 \\ &= (x+4+8)(x+4-8) \\ &= (x+12)(x-4) \end{aligned}$$

$$\begin{aligned} F &= (3-2x)^2 - 4 \\ &= (3-2x)^2 - 2^2 \\ &= (3-2x+2)(3-2x-2) \\ &= (5-2x)(1-2x) \end{aligned}$$

$$\begin{aligned} G &= 121 - (x-7)^2 \\ &= 11^2 - (x-7)^2 \\ &= (11+(x-7))(11-(x-7)) \\ &= (x+4)(-x+18) \end{aligned}$$

$$\begin{aligned} H &= 16 - (1-3x)^2 \\ &= 4^2 - (1-3x)^2 \\ &= (4+(1-3x))(4-(1-3x)) \\ &= (5-3x)(3+3x) \end{aligned}$$

### Exercice 4 p13

$$\begin{aligned} a) L &= (2x+1)^2 - 49 \\ L &= 4x^2 + 4x + 1 - 49 \\ &= 4x^2 + 4x - 48 \end{aligned}$$

$$\begin{aligned} b) \quad L &= (2x+1)^2 - 49 \\ &= (2x+1)^2 - 7^2 \\ &= (2x+1+7)(2x+1-7) \\ &= (2x+8)(2x-6) \end{aligned}$$