

**I) Factoriser:**

$$1) A = 81x^2 - 16 = (9x - 4)(9x + 4)$$

$$2) B = (3x + 1)(2x - 7) - (2x - 7)^2 = (2x - 7)(3x + 1 - 2x + 7) \\ = (2x - 7)(x + 8)$$

$$3) C = x^2 + 2x + 1 = (x + 1)^2$$

$$4) D = 16x^2 - (x - 3)^2 = (4x - x + 3)(4x + x - 3) = (3x + 3)(5x - 3)$$

$$5) E = 24x^2 - 72x + 54 = 6(4x^2 - 12x + 9) = 6(2x - 3)^2$$

**II) Développer:**

$$1) F = (2x + 4)^2 = 4x^2 + 16x + 16$$

$$2) G = (3x + 5)(2x - 5) - (4x - 7)^2 = 6x^2 - 15x + 10x - 25 - 16x^2 + 56x - 49 \\ = -10x^2 + 51x - 74$$

$$3) H = (3x + 7)^2 - (2x + 5)^2 = 9x^2 + 42x + 49 - 4x^2 - 20x - 25 = 5x^2 + 22x + 24$$