

CORRECTION DE L'INTERROGATION N° 4 (sujet A)

3ème

Exercice 1 (commun aux deux sujets)

$$(a+b)^2 = a^2 + 2ab + b^2 ; (a-b)^2 = a^2 - 2ab + b^2 ; (a+b)(a-b) = a^2 - b^2$$

Exercice 2

$$1) (12+x)^2 = 12^2 + 2 \times 12 \times x + x^2 = 144 + 24x + x^2$$

$$2) (x-8)^2 = x^2 - 2 \times 8 \times x + 8^2 = x^2 - 16x + 64$$

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

Exercice 3

$$1) 12 + 3x = \boxed{3} \times 4 + \boxed{3} \times x = 3(4+x)$$

$$2) 2x - 8x^2 = \boxed{2x} \times 1 - \boxed{2x} \times 4x = 2x(1-4x)$$

$$3) 7\boxed{(x-5)} - 2\boxed{(x-5)}(9-2x) = \boxed{(x-5)}[7 - 2(9-2x)] = (x-5)(7-18+4x) \\ = (x-5)(-11+4x)$$

$$4) 25x^2 + 70x + 49 = (5x)^2 + 2 \times 5x \times 7 + 7^2 = (5x+7)^2$$

$$5) 9x^2 + 16 - 24x = 9x^2 - 24x + 16 = (3x)^2 - 2 \times 3x \times 4 + 4^2 = (3x-4)^2$$

$$6) x^2 - 81 = x^2 - 9^2 = (x+9)(x-9)$$

CORRECTION DE L'INTERROGATION N° 4 (sujet B)

3ème

Exercice 2

$$1) (x-11)^2 = x^2 - 2 \times 11 \times x + 11^2 = x^2 - 22x + 121$$

$$2) (x+9)^2 = x^2 + 2 \times 9 \times x + 9^2 = x^2 + 18x + 81$$

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

Exercice 3

$$1) 21 + 7x = \boxed{7} \times 3 + \boxed{7} \times x = 7(3+x)$$

$$2) 4x - 16x^2 = \boxed{4x} \times 1 - \boxed{4x} \times 4x = 4x(1-4x)$$

$$3) 2\boxed{(x-3)} - 2\boxed{(x-3)}(7-3x) = \boxed{(x-3)}[2 - 2(7-3x)] = (x-3)(2-14+6x) \\ = (x-3)(-12+6x)$$

$$4) 16x^2 + 40x + 25 = (4x)^2 + 2 \times 4x \times 5 + 5^2 = (4x+5)^2$$

$$5) 4x^2 + 9 - 12x = 4x^2 - 12x + 9 = (2x)^2 - 2 \times 2x \times 3 + 3^2 = (2x-3)^2$$

$$6) x^2 - 49 = x^2 - 7^2 = (x+7)(x-7)$$