

3° : CONTROLE DE MATHEMATIQUES : CORRIGE SUJET A

$$i^2 = (9x)^2 + 2 \times 9x \times 8 + 8^2 = 81x^2 + 144x + 64$$

$$2 = 6^2 - 2 \times 6 \times 5x + (5x)^2 = 36 - 60x + 25x^2$$

$$i(4x + 7) = (4x)^2 - 7^2 = 16x^2 - 49$$

$$+ (2x - 5)(2x + 5) = x^2 + 2 \times x \times 1 + 1^2 + (2x)^2 - 5^2 = x^2 + 2x + 1 + 4x^2 - 25 = 5x^2 + 2x - 24$$

$$x - 2) - 3(2x - 4)^2 + 5(2x + 3)(1 - 7x)$$

$$- 3(4x^2 - 16x + 16) + 5(2x - 14x^2 + 3 - 21x)$$

$$- 12x^2 + 48x - 48 + 10x - 70x^2 + 15 - 105x$$

$$- 47x - 37$$

⋮

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

$$60x + 25 = (6x)^2 - 2 \times 6x \times 5 + 5^2 = (6x - 5)^2$$

$$5 = 3 \times 2x^2 - 3 \times 5 = 3(2x^2 - 5)$$

$$31 + 64x^2 = 9^2 + (8x)^2 + 2 \times 9 \times 8x = (9 + 8x)^2$$

$$r^2 = 4^2 - (7x)^2 = (4 - 7x)(4 + 7x)$$

⋮

$$i^2 - (3x - 1)(2x - 6)$$

$$(3x - 1)^2 - (3x - 1)(2x - 6)$$

$$9x^2 - 6x + 1 - (6x^2 - 18x - 2x + 6)$$

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3° : CONTROLE DE MATHEMATIQUES : CORRIGE SUJET B

$$1^2 = (8x)^2 + 2 \times 8x \times 9 + 9^2 = 64x^2 + 144x + 81$$

$$2^2 = 5^2 - 2 \times 5 \times 6x + (6x)^2 = 25 - 60x + 36x^2$$

$$3(7x + 4) = (7x)^2 - 4^2 = 49x^2 - 16$$

$$+ (2x + 6)(2x - 6) = x^2 + 2 \times x \times 1 + 1^2 + (2x)^2 - 6^2 = x^2 + 2x + 1 + 4x^2 - 36 = 5.$$

$$x + 2) - 3(4x - 2)^2 + 5(3x + 2)(1 - 7x)$$

$$- 3(16x^2 - 16x + 4) + 5(3x - 21x^2 + 2 - 14x)$$

$$- 48x^2 + 48x - 12 + 15x - 105x^2 + 10 - 70x$$

$$- 7x - 6$$

∴

$$x + 2) - 5(x + 2) = (x + 2)[(x + 1) - 5] = (x + 2)(x - 4)$$

$$60x + 36 = (5x)^2 - 2 \times 5x \times 6 + 6^2 = (5x - 6)^2$$

$$1 = 3 \times 2x^2 - 3 \times 7 = 3(2x^2 - 7)$$

$$4 + 81x^2 = 8^2 + (9x)^2 + 2 \times 8 \times 9x = (8 + 9x)^2$$

$$x^2 = 7^2 - (4x)^2 = (7 - 4x)(7 + 4x)$$

∴

$$x^2 - (3x - 1)(2x - 7)$$

$$(3x - 1)^2 - (3x - 1)(2x - 7)$$

$$9x^2 - 6x + 1 - (6x^2 - 21x - 2x + 7)$$

$$3x^2 - 8x - 6$$