

Identités remarquables

Correction

1) Développe puis réduis chaque expression

$$A = (2 + 3x)^2$$

$$B = (4x - 1)^2$$

$$C = (7 + 2x)(7 - 2x)$$

$$A = 2^2 + 2 \times 2 \times 3x + (3x)^2$$

$$B = (4x)^2 - 2 \times 4x \times 1 + 1^2$$

$$C = 7^2 - (2x)^2$$

$$A = 4 + 12x + 9x^2$$

$$B = 16x^2 - 8x + 1$$

$$C = 49 - 4x^2$$

2) Développe puis réduis chaque expression

$$A = (-4 - x)^2$$

$$B = (-5x + 9)(-5x - 9)$$

$$C = (-8x + 6)^2$$

$$A = (-4)^2 - 2 \times (-4) \times x + x^2$$

$$B = (-5x)^2 - 9^2$$

$$C = (-8x)^2 + 2 \times (-8x) \times 6 + 6^2$$

$$A = 16 + 8x + x^2$$

$$B = 25x^2 - 81$$

$$C = 64x^2 - 96x + 36$$

3) Factorise chaque expression

$$A = x^2 - 2x + 1$$

$$B = x^2 + 6x + 9$$

$$C = 9 - 4x^2$$

$$A = x^2 - 2 \times x \times 1 + 1^2$$

$$B = x^2 + 2 \times x \times 3 + 3^2$$

$$C = 3^2 - (2x)^2$$

$$A = (x - 1)^2$$

$$B = (x + 3)^2$$

$$C = (3 - 2x)(3 + 2x)$$

4) Factorise chaque expression

$$A = 4x^2 - 20x + 25$$

$$B = 16x^2 + 56x + 49$$

$$C = (8 - x)^2 - 36$$

$$A = (2x)^2 - 2 \times 2x \times 5 + 5^2$$

$$B = (4x)^2 + 2 \times 4x \times 7 + 7^2$$

$$C = (8 - x - 6)(8 - x + 6)$$

$$A = (2x - 5)^2$$

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

$$C = (2 - x)(14 - x)$$

5) Factorise chaque expression

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

$$B = (3x - 2)^2 - (3x - 2)$$

$$A = [(x-7) - (4+3x)][(x-7) + (4+3x)]$$

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

$$A = [x - 7 - 4 - 3x][x - 7 + 4 + 3x]$$

$$B = (3x - 2) [(3x - 2) - 1]$$

$$A = (-2x - 11)(4x - 3)$$

$$B = (3x - 2)(3x - 3)$$