

تمرين 1

بسّط ما يلي :

$$B = 1 - (x^3 + x^2 - 1) - (2 + x^2 + 2x^3) \quad ; ; \quad A = 2x^2 - 3x + 1 - x^2$$

$$D = \frac{2}{3}x^3 - \left(x^4 + x^3 - \frac{5}{3}x^3\right) + \frac{1}{2}x^4 \quad ; ; \quad C = x^3 - \left[x^2 - (x^3 - 2x^2 + 1)\right]$$

تمرين 2

بسّط التعابير التالية :

$$E = [(a - b) - (a - c)] - [(c - b) - (a + b)]$$

$$F = [(a + b + c) + (a + b - c)] - [(a - b + c) - (-a + b + c)]$$

$$G = [(a + b) - (c - a + b) + c] + [(a - c) - (a - b) + (b - c)]$$

تمرين 3

أنشر ثم بسّط الكتابات التالية :

$$H = (2x - 1) - 4(2 - 3x) + 2(x + 1) \quad ; ; \quad I = -\frac{1}{3}(3x + 6) + \frac{1}{5}(25x - 5) - x$$

$$J = x(x^2 - 1) - 2x^2 + 3x \quad ; ; \quad K = x^2(x^3 - x^2) - 3(x^5 + x^4)$$

$$L = (x - 1)(x^2 - x + 2) \quad ; ; \quad M = \left(2x - \frac{1}{3}\right)(x^2 + x - 2)$$

$$N = (x + 1)(x^2 - x + 1) \quad ; ; \quad O = (x + y)(x^2 - xy + y^2)$$

$$P = (x - 1)(x^4 + x^3 + x^2 + x + 1) \quad ; ; \quad Q = (x - y)(x^3 + x^2y + xy^2 + y^3)$$

تمرين 4

عمل ما يلي :

$$T = a^2b - ab^2 \quad ; ; \quad S = 4x^2 + 8x \quad ; ; \quad R = 2a - 3ab$$

$$W = \frac{1}{a} - \frac{2}{a^2} + \frac{1}{a^3} \quad ; ; \quad V = 21x^5 + 14x^4 - 21x^3 - 35x$$

$$Y = 2x + 1 - (2 + x)(2x + 1) \quad ; ; \quad X = (x + 1)(x - 3) - (x + 1)(2x - 1)$$

$$Z = (x - 1)^3 - (3x + 1)(1 - x)^2$$

تمرین 5

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$$(\dots + \dots)^2 = 9x^2 + \dots + 49 \quad ; ; \quad (\dots + \dots)^2 = 16x^2 + 4x + \dots \quad ; ; \quad (2x + \dots)^2 = \dots + 2x + \dots$$

$$(\dots - \dots)(\dots + 3) = x^2 - \dots \quad ; ; \quad (\dots - \dots)^2 = \dots - 2x + \frac{1}{9} \quad ; ; \quad (\dots - y)^2 = \dots - y + \dots$$

$$\left(\dots - \frac{5}{2}\right)^2 = \dots + 10y + \dots$$

تمرین 6

عمل ما يلي :

$$4x^2 + 4x + 1 \quad ; ; \quad 25 + 10x + x^2$$

$$x^2 + \frac{2}{3}x + \frac{1}{9} \quad ; ; \quad 169 + 78x + 9x^2$$

$$9x^6 + 6x^3 + 1 \quad ; ; \quad x^4 + x + \frac{1}{4}$$

$$x^5 + x^4 + x^3 + x^2 + x + 1 \quad ; ; \quad x^3 + x^2 + x + 1$$