

فرض تجريبي من اقتراح أذ سمير لخريسي - مدة الانجاز 55 دقيقة

تمرين 1 :

$$D = (3+x)(1-x)$$

$$D = 3 - 3x + x - x^2$$

$$D = 3 - 2x - x^2$$

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

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

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

$$A = x(x+1) + 5x$$

$$A = x^2 + x + 5x$$

$$A = x^2 + 6x$$

$$G = (2x+1)^2 - 25$$

$$G = (2x+1)^2 - 5^2$$

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

$$G = (2x+6)(2x-4)$$

$$F = x(x+3) + 5x + 15$$

$$F = x(x+3) + 5(x+3)$$

$$F = (x+3)(x+5)$$

$$E = x + 3x^2$$

$$E = x(1+3x)$$

تمرين 2 :

$$C = 27^2 \times 100^3$$

$$C = (3^3)^2 \times (10^2)^3$$

$$C = 3^6 \times 10^6$$

$$C = (3 \times 10)^6$$

$$C = 30^6$$

$$B = \frac{a^{12}}{a \times a^3}$$

$$B = \frac{a^{12}}{a^4} = a^{12-4} = a^8$$

$$A = a^2 \times (a^3)^5$$

$$A = a^2 \times a^{15}$$

$$A = a^{17}$$

تمرين 3 :

$$C = (\sqrt{5} + \sqrt{3})^2$$

$$C = (\sqrt{5})^2 + 2 \times \sqrt{5} \times \sqrt{3} + (\sqrt{3})^2$$

$$C = 5 + 2\sqrt{15} + 3$$

$$C = 8 + 2\sqrt{15}$$

$$B = \sqrt{5} \times \sqrt{15} \times \sqrt{3}$$

$$B = \sqrt{5} \times \sqrt{3} \times \sqrt{15}$$

$$B = \sqrt{15} \times \sqrt{15}$$

$$B = 15$$

$$A = \sqrt{1 + \sqrt{64}}$$

$$A = \sqrt{1 + 8}$$

$$A = \sqrt{9}$$

$$A = 3$$

تمرين 4 :

$$B = 2\sqrt{3} + \sqrt{27} - \sqrt{300}B$$

$$b = 2\sqrt{3} + \sqrt{9 \times 3} - \sqrt{100 \times 3}$$

$$B = 2\sqrt{3} + 3\sqrt{3} - 10\sqrt{3}B$$

$$B = 5\sqrt{3} - 10\sqrt{3} = -5\sqrt{3}$$

$$A = \frac{3}{\sqrt{5}} = \frac{3 \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}} = \frac{3\sqrt{5}}{5}$$

$$D = \frac{1}{\sqrt{2}} + \frac{5\sqrt{2}}{2-\sqrt{2}} = \frac{1 \times \sqrt{2}}{\sqrt{2} \times \sqrt{2}} + \frac{5\sqrt{2} \times (2-\sqrt{2})}{(2-\sqrt{2}) \times (2-\sqrt{2})}$$

$$D = \frac{\sqrt{2}}{2} + \frac{10\sqrt{2} - 10}{4-2} = \frac{\sqrt{2}}{2} + \frac{10\sqrt{2} - 10}{2} = \frac{11\sqrt{2} - 10}{2}$$

$$C = \frac{2}{2+\sqrt{3}} = \frac{2 \times (2-\sqrt{3})}{(2+\sqrt{3}) \times (2-\sqrt{3})}$$

$$C = \frac{4-2\sqrt{3}}{2^2 - (\sqrt{3})^2} = \frac{4-2\sqrt{3}}{4-3} = \frac{4-2\sqrt{3}}{1}$$

$$C = 4-2\sqrt{3}$$

تمرين 5 :

$$L = (1 + \sqrt{2})^4 = [(1 + \sqrt{2})^2]^2 = (1 + 2\sqrt{2} + 2)^2$$

$$L = (3 + 2\sqrt{2})^2 = 9 + 12\sqrt{2} + 8 = 17 + 12\sqrt{2}$$

$$K = (\sqrt{3} - \sqrt{2})^{2014} \times (\sqrt{3} + \sqrt{2})^{2014}$$

$$K = [(\sqrt{3} - \sqrt{2}) \times (\sqrt{3} + \sqrt{2})]^{2014} = (3 - 2)^{2014} = 1^{2014} = 1$$