

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

تمرين 1 :

انشر و بسط : $D = (3+x)(1-x)$ ، $B = (3+x)^2$ ، $A = x(x+1) + 5x$
عمل : $G = (2x+1)^2 - 25$ ، $F = x(x+3) + 5x + 15$ ، $E = x + 3x^2$

تمرين 2 : بسط : $A = a^2 \times (a^3)^5$ ، $B = \frac{a^{12}}{a \times a^3}$ ، $C = 27^2 \times 100^3$

تمرين 3 : أحسب : $A = \sqrt{1 + \sqrt{64}}$ ، $B = \sqrt{5} \times \sqrt{15} \times \sqrt{3}$ ، $C = (\sqrt{5} + \sqrt{3})^2$

تمرين 4 : بسط : $A = \frac{3}{\sqrt{5}}$ ، $B = 2\sqrt{3} + \sqrt{27} - \sqrt{300}$ ، $C = \frac{2}{2 + \sqrt{3}}$ ، $D = \frac{1}{\sqrt{2}} + \frac{5\sqrt{2}}{2 - \sqrt{2}}$

تمرين 5 : أحسب : $L = (1 + \sqrt{2})^4$ و $K = (\sqrt{3} - \sqrt{2})^{2014} \times (\sqrt{3} + \sqrt{2})^{2014}$

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تمرين 1 :

$D = (3+x)(1-x)$ $D = 3 - 3x + x - x^2$ $D = 3 - 2x - x^2$	$B = (3+x)^2$ $B = 3^2 + 2 \times 3 \times x + x^2$ $B = 9 + 6x + x^2$	$A = x(x+1) + 5x$ $A = x^2 + x + 5x$ $A = x^2 + 6x$
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$G = (2x+1)^2 - 25$ $G = (2x+1)^2 - 5^2$ $G = [(2x+1)+5][(2x+1)-5]$ $G = (2x+6)(2x-4)$	$F = x(x+3) + 5x + 15$ $F = x(x+3) + 5(x+3)$ $F = (x+3)(x+5)$	$E = x + 3x^2$ $E = x(1+3x)$
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تمرين 2 :

$C = 27^2 \times 100^3$ $C = (3^3)^2 \times (10^2)^3$ $C = 3^6 \times 10^6$ $C = (3 \times 10)^6$ $C = 30^6$	$B = \frac{a^{12}}{a \times a^3}$ $B = \frac{a^{12}}{a^4} = a^{12-4} = a^8$	$A = a^2 \times (a^3)^5$ $A = a^2 \times a^{15}$ $A = a^{17}$
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تمرين 3 :

$C = (\sqrt{5} + \sqrt{3})^2$ $C = (\sqrt{5})^2 + 2 \times \sqrt{5} \times \sqrt{3} + (\sqrt{3})^2$ $C = 5 + 2\sqrt{15} + 3$ $C = 8 + 2\sqrt{15}$	$B = \sqrt{5} \times \sqrt{15} \times \sqrt{3}$ $B = \sqrt{5} \times \sqrt{3} \times \sqrt{15}$ $B = \sqrt{15} \times \sqrt{15}$ $B = 15$	$A = \sqrt{1 + \sqrt{64}}$ $A = \sqrt{1+8}$ $A = \sqrt{9}$ $A = 3$
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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 :

$L = (1 + \sqrt{2})^4 = [(1 + \sqrt{2})^2]^2 = (1 + 2\sqrt{2} + 2)^2$ $L = (3 + 2\sqrt{2})^2 = 9 + 12\sqrt{2} + 8 = 17 + 12\sqrt{2}$	$K = (\sqrt{3} - \sqrt{2})^{2014} \times (\sqrt{3} + \sqrt{2})^{2014}$ $K = [(\sqrt{3} - \sqrt{2}) \times (\sqrt{3} + \sqrt{2})]^{2014} = (3 - 2)^{2014} = 1^{2014} = 1$
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