

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره کلاس A رتبه
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$y = x^2 + 4x + a \Rightarrow a > 0 \Rightarrow \min U$ الف) $x = \frac{-4}{2(1)} = -\frac{4}{2} = -2$ $y = (-2)^2 + 4(-2) + a = -4$

فصلت $\Rightarrow x = \frac{-b}{2a}$ و $y = \frac{-\Delta}{4a}$ ب) $y = \frac{-(-4)}{4(1)} = 1$

$y = -x^2 + 4x - 3 \Rightarrow a < 0 \Rightarrow \max U$ الف) $x = \frac{-b}{2a} = \frac{-4}{2(-1)} = 2$ $y = -(2)^2 + 4(2) - 3 = 1$

فصلت $\Rightarrow x = \frac{-b}{2a}$ و $y = \frac{-\Delta}{4a}$ ب) $y = \frac{-(-4)}{4(-1)} = -1$

$x^2 - 3x + a = 0 \Rightarrow \Delta > 0 \Rightarrow \Delta = b^2 - 4ac = + \Rightarrow 9 - 4(1)(a) = 1$ الف) $a = 1$

$9 - 4(1) = 1 \Rightarrow a = 1$ ب) $a = 1$

$a = 1 \Rightarrow a + b + c = 0 \Rightarrow 1 + (-3) + a = 0 \Rightarrow a = 2$ ج) $a = 2$

الف) $x^2 - 2x - 1 = 0 \Rightarrow x^2 - 2x + 1 = 2 \Rightarrow (x-1)^2 = 2 \Rightarrow x-1 = \pm\sqrt{2} \Rightarrow x = 1 \pm \sqrt{2}$ الف) $x = 1 \pm \sqrt{2}$

ب) $x^2 - x - 1 = 0 \Rightarrow x^2 - x + \frac{1}{4} = \frac{5}{4} \Rightarrow (x - \frac{1}{2})^2 = \frac{5}{4} \Rightarrow x - \frac{1}{2} = \pm\sqrt{\frac{5}{4}} \Rightarrow x = \frac{1}{2} \pm \frac{\sqrt{5}}{2}$ ب) $x = \frac{1}{2} \pm \frac{\sqrt{5}}{2}$

الف) $x^2 - 2x - 1 = 0 \Rightarrow \Delta = b^2 - 4ac = 4 + 4 = 8 \Rightarrow x = \frac{2 \pm \sqrt{8}}{2} = 1 \pm \sqrt{2}$ الف) $x = 1 \pm \sqrt{2}$

ب) $x^2 + x - 4 = 0 \Rightarrow \Delta = b^2 - 4ac = 1 + 16 = 17 \Rightarrow x = \frac{-1 \pm \sqrt{17}}{2}$ ب) $x = \frac{-1 \pm \sqrt{17}}{2}$

الف) $x^2 - 11x + 28 = 0 \rightarrow (x-4)(x-7) \rightarrow \begin{cases} x-4=0 \Rightarrow x=4 \\ x-7=0 \Rightarrow x=7 \end{cases}$

ب) $x^2 + 3x - 28 = 0 \rightarrow (x+7)(x-4) \rightarrow \begin{cases} x+7=0 \Rightarrow x=-7 \\ x-4=0 \Rightarrow x=4 \end{cases}$

الف) $\omega x^2 - 12x + 7 = 0 \rightarrow x^2 - 12x + 7\omega = 0 \rightarrow (x-7)(x-\omega) \rightarrow \begin{cases} x-7=0 \Rightarrow x=7 \\ x-\omega=0 \Rightarrow x=\omega \end{cases}$

$x = \frac{7}{\omega}$
 $x = \frac{\omega}{\omega} = 1$

نسبة

ب) $3x^2 - 10x + 7 = 0 \rightarrow x^2 - 10x + 21 = 0 \rightarrow (x-3)(x-7) \rightarrow \begin{cases} x-3=0 \Rightarrow x=3 \\ x-7=0 \Rightarrow x=7 \end{cases}$

الف) $2x^2 - 5x + 3 = 0 \Rightarrow a+b+c=0 \rightarrow \begin{cases} 1 \\ \frac{c}{a} = \frac{3}{2} \end{cases}$

ب) $2x^2 + 5x + 3 = 0 \Rightarrow a+c=b \rightarrow \begin{cases} -1 \\ -\frac{c}{a} = -\frac{3}{2} \end{cases}$

ج) $2x^2 - 5x + 1 = 0 \Rightarrow \Delta = 25 - 8 = 17 \Rightarrow x = \frac{-(-5) \pm \sqrt{17}}{4} = \frac{5 \pm \sqrt{17}}{4}$

د) $4x^2 + 7x + 9 = 0 \Rightarrow \Delta = 49 - 144 = -95 \rightarrow$ لا توجد حلول حقيقية

$s = \frac{-b}{a}, p = \frac{c}{a} \mid x^2 - 3x - 2 = 0 \Rightarrow s = \frac{-(-3)}{1} = 3, p = \frac{c}{a} = \frac{-2}{1} = -2$

الف) $s^2 - 2p = 9 - 2(-2) = 9 + 4 = 13$

ب) $s^3 - 3sp = 27 - 3(3)(-2) = 27 + 18 = 45$

الف) $\begin{pmatrix} 7 \\ \omega \end{pmatrix} + \begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{7 \times 9 \times \omega \times 2 \times 1}{7 \times 9 \times \omega \times 2 \times 1} + \frac{9 \times 1 \times 1}{1} = 21 + 9 = 30$

ب) $\begin{pmatrix} 9 \\ 3 \end{pmatrix} - \begin{pmatrix} 1 \\ 2 \end{pmatrix} = \frac{9 \times 1 \times 2}{9 \times 1 \times 2} - \frac{1 \times 2 \times 1}{1} = 3 - 2 = 1$