

19, 20

نام و نام خانوادگی پریم (م.ک.ا.ه) پاسخنامه تشریحی تکلیف شماره کلاس (م. ز. م. ه) A

الف) $a = + \Rightarrow \min = \left[\frac{-b}{2a} \right] \Rightarrow \frac{-b}{2a} = \frac{-4}{2} = -2 \Rightarrow \text{ext.} \left. \begin{matrix} -2 \\ -4 \end{matrix} \right\}$

$y = x^2 + 4x + 5 \Rightarrow y = 9 - 1 + 5 = -4$

ب) $\hookrightarrow \text{نقطه} = y = 5$

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الف) $y = -x^2 + 4x - 3 \Rightarrow y = x^2 + 1x - 3$

$a = - \Rightarrow \text{Max} = \text{ext} \left[\frac{-b}{2a} \Rightarrow \frac{-b}{2a} = \frac{+4}{-2} = -2 \Rightarrow \text{ext.} \left[\begin{matrix} 2 \\ 1 \end{matrix} \right. \right]$

$\frac{-\Delta}{2a} \Rightarrow \frac{-\Delta}{2a} = 1$

$\hookrightarrow \text{نقطه} y = -3$

$-x^2 - 4x + 3 = 0 \Rightarrow x^2 + 4x - 3 = 0 \Rightarrow (x+1)(x-3) = 0$

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الف) $\Delta = b^2 - 4ac > 0 \Rightarrow 9 - 4a > 0 \Rightarrow 9 > 4a \Rightarrow a < \frac{9}{4}$

ب) $\Delta = 0 \Rightarrow 9 - 4a = 0 \Rightarrow 9 = 4a \Rightarrow a = \frac{9}{4}$

ج) $\Delta < 0 \Rightarrow 9 - 4a < 0 \Rightarrow 9 < 4a \Rightarrow a > \frac{9}{4}$

د) $\Delta > 0 \Rightarrow 9 - 4a > 0 \Rightarrow 9 > 4a \Rightarrow a < \frac{9}{4}$

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

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

1, 2, 3

الف) $x^2 - 2x - 1 = 0 \Rightarrow \Delta = b^2 - 4ac = 4 - (4 \times (-1)) = 8$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} \Rightarrow \frac{2 \pm \sqrt{8}}{2} = \frac{2 \pm 2\sqrt{2}}{2} = 1 \pm \sqrt{2}$

ب) $x^2 + x - 1 = 0 \Rightarrow \Delta = b^2 - 4ac = 1 - (4 \times (-1)) = 5$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-1 \pm \sqrt{5}}{2}$

2

الف) $x^2 - 11x + 28 = 0$

$(x-4)(x-7) = 0 \rightarrow \boxed{x=4}$
 $\rightarrow \boxed{x=7}$

$\rightarrow \boxed{x=-V}$

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

الف) $\Delta x^2 - 12x + V = 0$

$x^2 - 12x + 36 = 0 \Rightarrow (x-6)(x-6) = 0$

$\rightarrow \boxed{x = \frac{V}{\Delta} = 1, 4}$

$\rightarrow \boxed{x = \frac{\Delta}{\Delta} = 1}$

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ب) $3x^2 - 10x + V = 0 \Rightarrow x^2 - 10x + 12 = 0 \rightarrow (x-2)(x-6) = 0$
 $\rightarrow \boxed{x = \frac{V}{3} = 1}$
 $\rightarrow \boxed{x = \frac{V}{3}}$

الف) $2x^2 - 5x + 2 = 0 \xrightarrow{\Delta} x^2 - 5x + 4 = 0 \Rightarrow (x-1)(x-4) = 0 \rightarrow \boxed{x = \frac{V}{2} = 1}$

ب) $2x^2 + 5x + 2 = 0 \xrightarrow{\Delta} x^2 + 5x + 4 = 0 \rightarrow (x+1)(x+4) = 0 \rightarrow \boxed{x = \frac{V}{2} = 1/5}$

ج) $2x^2 - 5x + 1 = 0 \xrightarrow{\Delta} \Delta = b^2 - 4ac = 25 - (4 \times 2 \times 1) = 17 \rightarrow \boxed{x = \frac{V}{2} = -1/5}$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{5 \pm \sqrt{17}}{4}, \frac{5 - \sqrt{17}}{4}$

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د) $2x^2 + 5x + 9 = 0 \Rightarrow \Delta = b^2 - 4ac = 25 - 36 = -11 < 0 \Rightarrow \text{لا يوجد حلا حقيقي}$

$x^2 - 3x - 2 = 0 \xrightarrow{\Delta} \Delta = b^2 - 4ac = 9 + 8 = 17 \rightarrow x = \frac{3 \pm \sqrt{17}}{2} \Rightarrow S_2 = \frac{3 + \sqrt{17}}{2}, \frac{3 - \sqrt{17}}{2}$

$P = \frac{3 + \sqrt{17}}{2} \times \frac{3 - \sqrt{17}}{2} = \frac{9 - 17}{4} = -\frac{8}{4} = -2$

$S = \frac{4}{2} = 2$

الف) $S^2 - 4P = 9 - (-8) = 17$

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ب) $S^2 - 4P = 2V + 12 = 17$

الف) $\begin{bmatrix} V \\ \Delta \end{bmatrix} + \begin{bmatrix} 9 \\ 2 \end{bmatrix} = \frac{9 \times 1}{2!} = 4.5$

8

$\frac{V \times 9 \times 2 \times 1}{1 \times 2 \times 3 \times 4} = 1 + 3 \times 9 = 28$
 $\frac{9 \times 1 \times 2}{2!} = 9, \frac{\Delta \times V}{1!} = 12$

ب) $\begin{bmatrix} 9 \\ 2 \end{bmatrix} - \begin{bmatrix} 1 \\ 1 \end{bmatrix} = 12 - 12 = 0$

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