19,75

نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ...1... کلاس .....B.....

**۱**

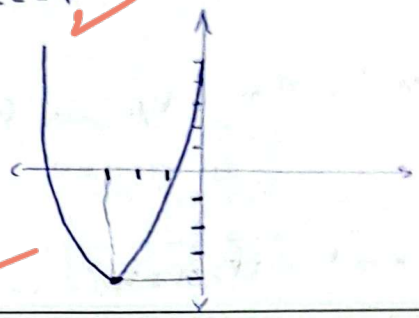
الف) min $\left| \begin{array}{l} -3 \\ -4 \end{array} \right.$ $\quad \frac{-b}{2a} \to -\frac{6}{2} = -3$

$9 - 18 + 5 = -4$

$\left| \begin{array}{l} -\frac{b}{2a} \\ -\frac{\Delta}{4a} \end{array} \right.$

$y = x^2 + 6x + 5 \to a > 0$ min

ب)



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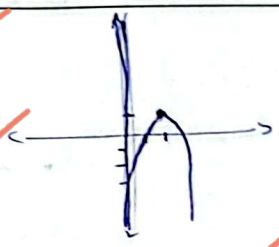
**۲**

الف) $\frac{-4}{-2} = 2$

$-4 + 8 - 3 = 1$

max $\left| \begin{array}{l} 2 \\ 1 \end{array} \right.$

$y = -x^2 + 4x - 3 \to a < 0$ max



ب) $y = -x^2 + 4x - 3$

$0 = -x^2 + 4x - 3$

$x^2 - 4x + 3 = 0$

$(x-1)(x-3) = 0$

$x < \begin{array}{l} 3 \\ 1 \end{array}$

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**۳**

$\Delta = b^2 - 4ac = (-3)^2 - 4(1)(a) = 9 - 8(a)$

الف) $9 - 8a > 0 \Rightarrow \frac{9}{8} > a$

ب) $9 - 8a = 0 \Rightarrow \frac{9}{8} = a$

ج) $9 - 8a < 0 \Rightarrow a > \frac{9}{8}$

د) $9 - 8a \geq 0 \to a \leq \frac{9}{8}$

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**۴**

الف) $x^2 - 2x - 1 = 0 \to x^2 - 2x - 1 + 2 = 2 \to (x-1)^2 = 2$

$x - 1 = \pm\sqrt{2}$

$x = 1 - \sqrt{2}$

$x = 1 + \sqrt{2}$

ب) $x^2 - x - 1 = 0 \to x^2 - x - 1 + \frac{1}{4} - \frac{1}{4} = 0 \to$

$(x - \frac{1}{2})^2 = \frac{5}{4} \to x - \frac{1}{2} = \pm\frac{\sqrt{5}}{2} \to x < \begin{array}{l} \frac{1+\sqrt{5}}{2} \\ \frac{1-\sqrt{5}}{2} \end{array}$

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**۵**

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

$x = \frac{-b \pm \sqrt{8}}{2a} \to \frac{+2 \pm \sqrt{8}}{2}$

ب) $x^2 + x - 4 = 0 \to \Delta = b^2 - 4ac \to 1 - (-16) = +17$

$\frac{-1 \pm \sqrt{17}}{2}$

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CamScanner

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|---|---|
| الف) $x^2 - 11x + 28 = 0 \rightarrow (x-4)(x-7) = 0 \rightarrow x = 4 , x = 7$ | ۲ |
| ب) $x^2 + 3x - 28 = 0 \rightarrow (x+7)(x-4) = 0 \rightarrow x = -7 , x = 4$ | |
| الف) $6x^2 - 12x + 7 = 0 \rightarrow x^2 - 2x + \frac{7}{6} = 0 \rightarrow (x-1)(x-\frac{7}{6}) = 0$<br>$x = 1 , x = \frac{7}{6}$ | ۲ |
| ب) $x^2 - 10x + 24 = 0 \rightarrow x^2 - 10x + 25 - 1 = 0 \rightarrow (x-5)^2 - 1 = 0$<br>$(x-5-1)(x-5+1) = 0$<br>$x = 6 , x = 4$ | |
| $2x^2 - 5x + 3 = 0 \rightarrow (x-1)(x-\frac{3}{2}) = 0 \rightarrow x = 1 , x = \frac{3}{2}$<br>$x^2 + 5x + 6 = 0 \rightarrow (x+2)(x+3) = 0 \rightarrow x = -2 , x = -3$<br>$x^2 - 5x + 1 = 0 \quad x = \frac{-(-5) \pm \sqrt{5}}{2} = \frac{5 \pm \sqrt{5}}{2}$<br>$4x^2 + 7x + 9 = 0 \quad \Delta = b^2 - 4ac \rightarrow 49 - 144 = -95$ ریشه حقیقی ندارد | ۸ |
| $x^2 - 3x + 2 = 0$<br>$S = \frac{-b}{a} = \frac{5}{2}$<br>$S^2 - 2P = \left(\frac{-(-3)}{1}\right)^2 - 2\left(\frac{-2}{1}\right) = 9 + 4 = 13$<br>$S^3 - 3SP = 3^3 + 18 = 27 + 18 = 45$ | ۲ |
| الف) $\left(\frac{3}{2}\right)^2 + \left(\frac{9}{2}\right)^2 = \frac{27}{4} + \frac{81}{4} = 27 + 20 = 47$<br>ب) $\left(\frac{4}{3}\right) - \left(\frac{1}{2}\right) = \frac{4 \times 2 - 1 \times 3}{3 \times 2 \times 1} = \frac{8 - 3}{6} = \frac{5}{6}$ | ۲ |