

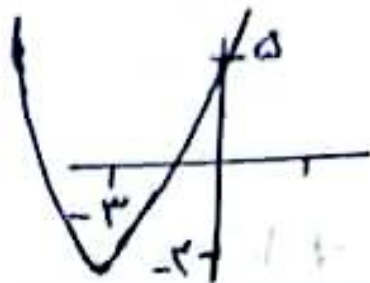
نام و نام خانوادگی ... (ارتشیا / میرزا) ... پاسنامه تشریحی تکلیف شماره 1 ... کلاس ... (م) ...

$$y = x^2 + 4x + 5$$

$$9 + (-18) + 5 = -2$$

$$\text{Min} \begin{vmatrix} -3 \\ -2 \end{vmatrix}$$

(الف)



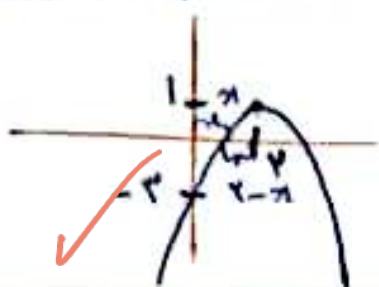
(ب)

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

$$y = -4 + 18 - 3 = 1$$

$$\text{Max} \begin{vmatrix} 2 \\ 1 \end{vmatrix}$$

(الف)



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

$$x = 1, 3 \quad \left[\frac{1}{0} \right] \text{ و } \left[\frac{3}{0} \right] \text{ (ب)}$$

$$2-x = 3x \Rightarrow 2 = 4x \Rightarrow x = 0.5$$

$$0.5 + 3 = 3.5$$

1.0

2

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

$$\frac{9}{4} > a$$

$\Delta \Rightarrow$ مثبت باشد

$$\Leftrightarrow 9 > 1a$$

$$2 - 4a < 0 \Rightarrow 9 - 4a > 0$$

$$12a = 1$$

(ب)

$$\Delta = 0 \Rightarrow 2 - 4a = 0$$

$$9 - 1a = 0$$

$$9 = 1a \Rightarrow a = 9$$

$$\Delta = \text{منفی} \quad 9 - 1a < 0$$

$$9 < 1a$$

$$\frac{9}{1} < a$$

$$12a = 2$$

$$a = 0$$

$$a \geq \frac{9}{4}$$

1.10

3

$$\text{الف) } x^2 - 2x - 1 = 0$$

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

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

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

$$\Rightarrow \left(x + \frac{1}{2}\right)^2 = \frac{1}{4} + \frac{1}{4} = \frac{1}{2} \Rightarrow x + \frac{1}{2} = \pm \sqrt{\frac{1}{2}} \Rightarrow x = -\frac{1}{2} \pm \sqrt{\frac{1}{2}}$$

2

4

$$\text{الف) } x^2 - 2x - 1 = 0$$

$$\Delta = 4 - (-4) = 8$$

$$\frac{2 \pm \sqrt{8}}{2}$$

$$\text{ب) } x^2 + x - 2 = 0$$

$$\Delta = 1 - (-8) = 9$$

$$\frac{-1 \pm \sqrt{9}}{2}$$

2

5

$$\text{الف) } x^2 - 11x + 21 = 0 \Rightarrow (x-7)(x-3) = 0 \Rightarrow x = +7, +3 \checkmark$$

$$\text{ب) } x^2 + 3x - 21 = 0 \Rightarrow (x+7)(x-3) = 0 \Rightarrow x = -7, +3 \checkmark$$

$$\text{الف) } 5x^2 - 12x + 7 = 0 \Rightarrow x^2 - 12x + 35 = (x-7)(x-5) \Rightarrow x = \frac{7}{5}, \frac{5}{5} = 1 \checkmark$$

$$\text{ب) } 3x^2 - 10x + 7 = x^2 - 10x + 21 \Rightarrow (x-7)(x-3) \Rightarrow x = \frac{7}{3}, \frac{3}{3} = 1 \checkmark$$

$$\text{الف) } 2x^2 - 5x + 3 = 0 \quad 2 - 5 + 3 = 0 \quad x = 1, \frac{3}{2} = \frac{3}{2} \checkmark$$

$$\text{ب) } 2x^2 + 5x + 3 = 0 \quad \Delta = 25 - 24 = 1 \quad \frac{-5 \pm \sqrt{1}}{4} \Rightarrow x = \frac{-3}{4}, \frac{-1}{4} \checkmark$$

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

$$\text{د) } 4x^2 + 7x + 9 = 0 \quad \Delta = 49 - 144 = -95 \quad \Delta = \text{منفي لانه} \checkmark$$

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

$$S = -3 \quad P = -2$$

$$S = \frac{-b}{a} \quad , \quad P = \frac{c}{a}$$

$$\text{الف) } S^2 - 2P = 14 - 12 = 2 = -S \checkmark$$

$$S = 3 \quad , \quad P = -2$$

$$\text{ب) } S^3 - 3SP = -27 - (-6) = -21 = 2P - 3S \checkmark$$

$$\text{الف) } \begin{pmatrix} 7 \\ 5 \end{pmatrix} + \begin{pmatrix} 9 \\ 2 \end{pmatrix} = 5V \checkmark$$

$$\text{ب) } \begin{pmatrix} 9 \\ 3 \end{pmatrix} - \begin{pmatrix} 1 \\ 2 \end{pmatrix} = 2A \checkmark$$