

بسم خدا

18/2/50

P

Date :

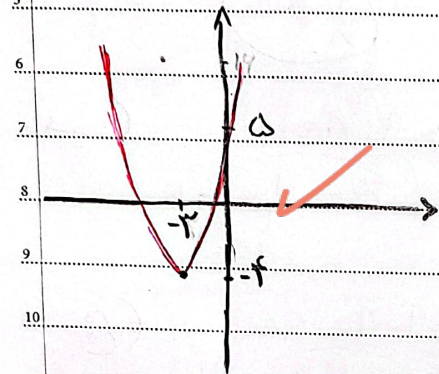
Subject : ایلمانی ریاضی دهم 3

تالیف شماره 1

ext  $\left| \begin{array}{l} -b \\ 2a \end{array} \right| \rightarrow \text{Min} \left| \begin{array}{l} -3 \\ -4 \end{array} \right|$

(الف)

قابل تبدیل!

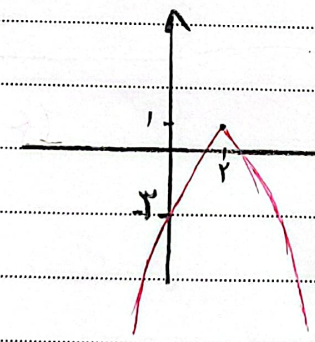


(ب)

ext  $\left| \begin{array}{l} -b \\ 2a \end{array} \right| \rightarrow \text{Max} \left| \begin{array}{l} 2 \\ 1 \end{array} \right|$

(الف)

110



(ب)

نقطه برخورد با محور ها  
 $y = -(x-1)(x-3)$

1 و 3

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

(الف) ٣

$$\Delta > 0 \quad b^2 - 4ac > 0 \Rightarrow 9 - 1a > 0$$

$$\Rightarrow 9 > 1a$$

$$\Rightarrow \frac{9}{1} > a$$

$$\Delta = 0 \quad b^2 - 4ac = 0 \Rightarrow 9 - 1a = 0$$

$$\Rightarrow a = \frac{9}{1}$$

$$\Delta < 0 \quad b^2 - 4ac < 0 \Rightarrow 9 - 1a < 0$$

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

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

$$(x-1)^2 = 2$$

0, 0

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

$$(الف) x^2 - 2x - 1 = 0$$

$$\rightarrow x^2 - 2x = 1 \xrightarrow{+1} x^2 - 2x + 1 = 1 \rightarrow (x-1)^2 = 1$$

$$\rightarrow |x-1| = 1 \quad \begin{cases} x-1 = 1 \rightarrow x = 2 \\ x-1 = -1 \rightarrow x = 0 \end{cases}$$

$$\begin{cases} x = 2 \\ x = 0 \end{cases}$$

محدث سوال الاستبانه  
وارد کردی

P417

Date:

$$x^2 - x - 1 = 0 \quad + \frac{0}{1}$$

Subject:

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

$$x - x + \frac{1}{x} = \frac{0}{x} \rightarrow (x - \frac{1}{x})^2 = 0$$

2  $\rightarrow x^2 + x = 4 \quad + \frac{1}{x} \rightarrow x^2 + x + \frac{1}{x} = 4 + \frac{1}{x}$

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

3  $\rightarrow (x + \frac{1}{x})^2 = \frac{17}{x^2} \rightarrow |x + \frac{1}{x}| = \pm \frac{\sqrt{17}}{x}$

4  
5  $\begin{cases} x = -\frac{1}{x} + \frac{\sqrt{17}}{x} \\ x = -\frac{1}{x} - \frac{\sqrt{17}}{x} \end{cases}$

8 (الف)  $x^2 - 2x - 1 = 0$

9  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow x = \frac{+2 \pm \sqrt{4 + 4}}{2}$

10  
11  $\rightarrow \begin{cases} x_1 = \frac{+2 + \sqrt{8}}{2} = \frac{2 + 2\sqrt{2}}{2} = 1 + \sqrt{2} \\ x = \frac{2 - 2\sqrt{2}}{2} = 1 - \sqrt{2} \end{cases}$

14 (ب)  $x^2 + x - 4 = 0$

15  $x = \frac{-1 \pm \sqrt{1 + 16}}{2} \rightarrow \begin{cases} x = \frac{-1 + \sqrt{17}}{2} \\ x = \frac{-1 - \sqrt{17}}{2} \end{cases}$

18 (الف)  $x^2 - 11x + 21 = 0$

19  $(x - 7)(x - 3) = 0 \rightarrow \begin{cases} x - 7 = 0 \rightarrow x = 7 \\ x - 3 = 0 \rightarrow x = 3 \end{cases}$

PARAMOUNT

$$\rightarrow x^2 + 3x - 21 = 0$$

$$(x+7)(x-3) = 0 \rightarrow \begin{cases} x = -7 \\ x = 3 \end{cases}$$

$$\text{الف) } \Delta x^2 - 12x + V = 0$$

$$x^2 - 12x + 3\Delta = 0 \rightarrow (x-7)(x-1) = 0$$

$$\rightarrow \begin{cases} x = \frac{V}{\Delta} \\ x = 1 \end{cases}$$

$$\rightarrow x^2 - 10x + V = 0$$

$$x^2 - 10x + 21 = 0 \rightarrow (x-7)(x-3) = 0$$

$$\rightarrow \begin{cases} x = \frac{V}{3} \\ x = \frac{V}{7} = 1 \end{cases}$$

$$\text{الف) } \Delta x^2 - 5x + 2 = 0$$

$$x^2 - 5x + 2 = 0 \rightarrow (x-2)(x-3) = 0$$

$$\begin{cases} x = \frac{2}{3} \\ x = 1 \end{cases}$$

$$1 \quad \text{ب) } 2x^2 + 5x + 2 = 0 \quad (نوی)$$

$$2 \quad x^2 + 5x + 2 = 0 \Rightarrow (x+1)(x+2)$$

$$3 \quad \rightarrow \begin{cases} x = -2 \\ x = -1 \end{cases} \quad x_2 = \begin{cases} -\frac{3}{2} \\ -1 \end{cases}$$

$$5 \quad \text{ج) } 2x^2 - 5x + 1 = 0 \quad (دلت)$$

$$6 \quad \frac{+5 \pm \sqrt{25-8}}{4} \Rightarrow \begin{cases} x = \frac{\sqrt{17}+5}{4} \\ x = \frac{-\sqrt{17}+5}{4} \end{cases}$$

$$9 \quad \text{د) } 5x^2 + 17x + 9 = 0$$

$$10 \quad \Delta = b^2 - 4ac \rightarrow 49 - 144 = -95$$

11  $\Delta < 0$  (ریشه حقیقی ندارد)

$$12 \quad \text{الف) } S^2 - 2P = 9 - 4 = 5$$

$$x^2 - 3x - 2 = 0 \quad (9)$$

$$9 + 4 = 13$$

$$15 \quad \text{ب) } S^2 - 3SP = 27 + 1 = 28$$

$$+3 \pm \sqrt{9+1}$$

$$16 \quad S = 3$$

$$17 \quad P = \frac{9-17}{4} = -2$$

$$\begin{cases} x = \frac{3 \pm \sqrt{10}}{2} \\ x = \frac{3 \pm \sqrt{10}}{2} \end{cases}$$

$$19 \quad \text{الف) } \begin{pmatrix} 7 \\ 5 \end{pmatrix} + \begin{pmatrix} 9 \\ 1 \end{pmatrix} \Rightarrow \frac{7 \times 9}{7 \times 1} + \frac{9 \times 1}{7 \times 1} = 21 + 9 = 30$$

$$20 \quad \text{ب) } \begin{pmatrix} 9 \\ 1 \end{pmatrix} + \begin{pmatrix} 1 \\ 7 \end{pmatrix} = \frac{9 \times 1 \times 7}{7 \times 7 \times 1} - \frac{1 \times 7}{7 \times 1} = 14 - 1 = 13$$