

هم نخبه (صبر)

بنام پروردگار و اراده

نظارتی

$$y = a(x+1)^2 + 9 \quad \text{نکته} \quad |9a+9|=1 \rightarrow a = -\frac{1}{9} \quad -1$$

$$y = -\frac{1}{9}(x+1)^2 + 9 \rightarrow -\frac{1}{9}(x^2 + 2x + 1) + 9 = -\frac{1}{9}x^2 - \frac{2}{9}x + \frac{16}{9}$$

$$\Delta > 0 \Rightarrow m^2 - 4(2(m+9)) > 0 \rightarrow m^2 - 8m - 72 > 0 \quad -2$$

$$\frac{-b}{2a} > 0 \rightarrow \frac{-m}{2} > 0 \rightarrow m < 0$$

$$\frac{c}{a} > \frac{m+9}{2} > 0 \rightarrow m > -9 \rightarrow m = (-9, -4)$$

$$S = 1 \Rightarrow \alpha + \beta = 1 \rightarrow \frac{-2m+1}{3} = \frac{3}{1-m} \Rightarrow -2m+1 = 3-m \Rightarrow m = -2 \quad -3$$

$$m^2 - 5m - 14 > 0 \rightarrow (m-7)(m+2) > 0 \rightarrow m < -2 \text{ or } m > 7$$

$$m = -2 \rightarrow 3x^2 - 3x + 3 = 0 \rightarrow \Delta < 0 \text{ ق ق}$$

$$m = 7 \rightarrow 3x^2 + 9x - 3 = 0 \rightarrow \Delta > 0 \text{ ق ق}$$

$$x^2 - x - 1 = 0 \quad x_1 + x_2 = 1, \quad \frac{1}{x_1} + \frac{1}{x_2} = \frac{x_1 + x_2}{x_1 x_2} = \frac{1}{-1} = -1 \quad -4$$

$$1 - (-1) + \frac{1}{-1} = 1$$

$$(x_1 + 1)(x_2 + 1) = (x_1 + x_2) + (x_1 + x_2) + \frac{1}{x_1 x_2} = -1 + 1 + (-1) = -1$$

$$y = x - \frac{1}{x} = \frac{x^2 - 1}{x}$$

$$(t^2 + 1)(t^2 - 1) = 2t^2 \rightarrow t^4 - 1 = 2t^2 \rightarrow t^4 - 2t^2 - 1 = 0 \quad -5$$

$$t^4 - 2t^2 - 1 = 0 \rightarrow t^2 = \frac{2 \pm \sqrt{4 + 4}}{2} = 1 \pm \sqrt{2}$$

$$t^2 = 1 + \sqrt{2} \Rightarrow t = \pm \sqrt{1 + \sqrt{2}}$$

نکته

$$x - 2x \rightarrow 3x = \frac{4}{3} \rightarrow x = \frac{4}{9} \rightarrow x = 2 + \frac{2}{3}$$

-9

$$a = \frac{2}{3} \rightarrow a = \frac{2}{3}(2+2) = 1$$

$$a = -\frac{2}{3} \rightarrow a = \frac{2}{3}(-\frac{2}{3} - 2) = 1$$

$$\Rightarrow 1 - (-1) = 2$$

$$a > 0 \quad \frac{-b}{a} > 0 \quad \frac{b}{a} < 0 \quad 2+2a < 0 \rightarrow 2a < -2 \rightarrow a < -1$$

-1

$$\{ \emptyset \} \rightarrow \text{مجموعه تهی}$$

$$y = \frac{x^2 + 2x - 2}{x^2 + 2x - 2} \rightarrow x = 2$$

-1

$$y = -(x-1)(x-2) + 1 \Rightarrow -x^2 + 2x + 1 \quad b = 2 \quad a = 1 \rightarrow axb = 1$$

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

$$\frac{1}{1} = \frac{b}{1} \Rightarrow b = 1$$

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

$$\left[\frac{a}{1} \right] = \left[\frac{1}{1} \right] = -1$$

-9

$$\begin{cases} x + y = -2 \\ x + z = -2 \end{cases} \Rightarrow \begin{cases} x = -2 - y \\ x = -2 - z \end{cases} \Rightarrow -2 - y = -2 - z \Rightarrow y = z$$

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