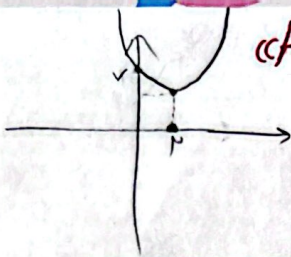


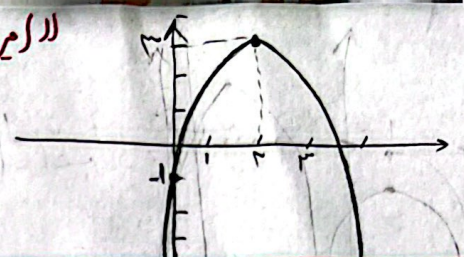
«امیر علی وحیدر» «یاد دهنگر» A»

$$x^2 - 2x + 1 + 3 \rightarrow$$

$$-\frac{b}{2a} = \frac{2}{2} = 1$$



$$x = -x^2 + 2x - 1 \rightarrow$$



-1

$$m \Rightarrow (-\infty, -3) \cup (5, +\infty)$$

$$m^2 + 1 + 2m - 2(m+3) = m^2 + 1 + 2m - 2m - 6 = m^2 - 5$$

$$(m+3)(m-5) \leftarrow m^2 - 2m - 15 = 0$$

$$m = 5 \text{ و } -3$$

$$m \Rightarrow (-3, 5)$$

$$m \Rightarrow (-\infty, -3] \cup [5, +\infty)$$

$$\Delta > 0 \rightarrow 2m^2 + 2 + 11m - 2(10m - 20) = 2m^2 + 2 + 11m - 20m + 40 = 2m^2 - 9m + 42$$

-2 (الف)

$$a = m - 2 < 0 \rightarrow m < 2 \quad \Delta = (m+1)^2 - 2(m-2)(1) = m^2 - 2m + 1 + 2 = m^2 - 2m + 3$$

نشر با $m < 2$ در $\Delta > 0$ مرتبه می بینیم

-2 (الف)

$$-\frac{-(m+1)}{2(m-2)} = 2 \rightarrow \frac{m+1}{2m-4} = 2$$

$$m+1 = 2(2m-4) \rightarrow m+1 = 4m-8 \rightarrow 9 = 3m \rightarrow m = 3$$

$$\Delta = (-2 \sin \alpha)^2 - 2\left(\frac{2}{\sqrt{2}}\right)\left(\frac{\sqrt{2}}{\sqrt{2}}\right) = 0 \quad 2 \sin^2 \alpha - 2 = 0 \rightarrow \sin^2 \alpha = 1 \rightarrow \sin \alpha = \pm 1$$

این رابطه حقیقت، با شرایط مسئله در $\alpha = -\frac{\pi}{2}$ و $\alpha = \frac{\pi}{2}$ برقرار است.

$$x_0 = -\frac{-2}{2\left(\frac{\sqrt{2}}{\sqrt{2}}\right)} = \frac{2}{\sqrt{2}} = \sqrt{2} \times \frac{\sqrt{2}}{\sqrt{2}} = \frac{2}{\sqrt{2}}$$

-6

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

$$x = \frac{(12x+1)(x-1) \times ((3x-5)(x+1))}{-(x-1)(x+1)} \rightarrow x = -(3x+1)(3x-5) \quad x_{max} = -9\left(\frac{2}{\sqrt{2}}\right)^2 + 12\left(\frac{2}{\sqrt{2}}\right) + 5$$

9

$$S = \frac{m+2}{m} \quad p = \frac{2}{m} \rightarrow rs = \omega p + v \rightarrow r\left(\frac{m+2}{m}\right) = \omega\left(\frac{2}{m}\right) + v \rightarrow 14 = 2m \rightarrow m = 7$$

$$x_1^2 + x_2^2 = \left(\frac{13}{\sqrt{2}}\right)^2 - 2\left(-\frac{1}{\sqrt{2}}\right) \leftarrow s = \frac{1}{\sqrt{2}} \text{ و } p = -\frac{1}{\sqrt{2}}$$

-7

$$\alpha + \beta = (x+1) - 2x = 1 - x \quad (\alpha + \beta) = s - 2p \rightarrow 1 - x = 2 - 2 \times \frac{2}{m} \Rightarrow 1 - x = 2 - \frac{4}{m} \Rightarrow 1 - x = 2 - \frac{4}{7} \Rightarrow 1 - x = \frac{10}{7} \Rightarrow x = -\frac{3}{7}$$

$$\frac{\alpha + \beta}{\alpha \alpha \beta} = \frac{95}{2(2)} = \frac{95}{4} = 23.75$$

$$ax^2 + (b-2)x - 1 = 0 \rightarrow 2 \times 2 = \frac{\Delta}{a} \Rightarrow 9a = -1 \Rightarrow a = -\frac{1}{9}$$

$$b = 2 - 2\left(-\frac{2}{\sqrt{2}}\right) = 2 + \frac{4}{\sqrt{2}} = \frac{2\sqrt{2} + 4}{\sqrt{2}} \quad x = \frac{-b}{2a} = \frac{1}{\sqrt{2}}$$

-8

-9

-10

$$m^2 - 12m - 12 = 0 \rightarrow m = 6 \pm 4\sqrt{2} \quad \text{and} \quad \frac{m+1}{4} > 0 \rightarrow m > -1$$

$$\boxed{m = 6 - 4\sqrt{2}}$$

-10