

$$y = (a-1)m^2 + m + c$$

$$m = \frac{-b}{2a} = \frac{-1}{2(a-1)} \rightarrow \frac{-1}{2(a-1)} = c \rightarrow a = \frac{c}{2}$$

$$y = -\frac{1}{2}m^2 + m + c \rightarrow -2y = m^2 - 2m - 2c \rightarrow -2y = (m-1)(m+1) - 2c$$

$$(m+\frac{c}{2})(m-\frac{c}{2})$$

$$m = \frac{1}{2}, -\frac{c}{2}$$

$$u = -\frac{c}{2}, y$$

$$f(m) = mm^2 - am + em$$

m.c.



m	m ₁	m ₂
f(m)	-	+

$$1 < a \rightarrow b^2 - 4a = 10 - 4m^2$$

$$1 < 10 - 4m^2 \rightarrow -\frac{9}{4} < m < \frac{9}{4}$$

$$\omega_{\text{شماره}} = \frac{1-\sqrt{2}}{2}, \frac{1+\sqrt{2}}{2}$$

$$S = \alpha + \beta = 1 - \frac{\sqrt{2}}{2} + 1 + \frac{\sqrt{2}}{2} = 2$$

$$P = \alpha \cdot \beta = (1 - \frac{\sqrt{2}}{2})(1 + \frac{\sqrt{2}}{2}) = 1 - \frac{2}{4} = \frac{1}{2}$$

$$y = m^2 - 2m + \frac{9}{4} \rightarrow \text{ضرایب صحیح}$$

$$m^2 - 2m + m + 1 = 0$$

$$\alpha \in \beta$$

$$m^2 - m + 1 = 0$$

$$m = ?$$

$$m = \frac{1 \pm \sqrt{3}}{2}$$

$$S = \frac{1 \pm \sqrt{3}}{2} = 2$$

$$2\alpha^2 + \alpha^2 + 1 - 13 = 10$$

$$2m + 2 = 10 \rightarrow m = 4$$

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

$$2(\alpha + \beta) + \alpha - \beta = 10 \rightarrow 2(2m+2) - 2(m+1) = 10$$

$$(2-1)(2+1) = 3$$

$$\alpha + \beta = 5 - 2P = 14 + 2(m+1) = 2m + 16$$

$$S(2, 9)$$

در صورتی که y صحیح باشد

$$y = a(m-h)^2 + k \rightarrow y = a(m-1)^2 + 9 \rightarrow a = 2a + 9 \rightarrow a = -9$$

$$y = -(m-1)^2 + 9 \rightarrow y = -m^2 + 2m - 1 + 9 = -m^2 + 2m + 8 \rightarrow -1 < m < 9$$

$$am^2 - 2m + 9 = 0$$

$$- < \beta$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{2}{a}$$

$$\frac{2+a}{a \cdot \beta} = \frac{2}{a} \rightarrow \frac{2}{a \cdot \beta} = \frac{2}{a} \rightarrow \frac{1}{\beta} = 1 \rightarrow \beta = 1$$

$$\alpha + \beta = \frac{2}{a}$$

$$\alpha = 0 \rightarrow \beta = \frac{2}{a} - 0 = \frac{2}{a}$$

$$\alpha = -0 \rightarrow \beta = -\frac{2}{a} + 0 = -\frac{2}{a}$$

$$1 = \frac{2}{a} \rightarrow a = 2, -2$$

$$m^2 + mm - 2m = 0$$

$$\alpha^2 - m\beta = 1$$

$$\alpha + \beta = 1$$

$$1 + 1 = 2 \rightarrow 2 \neq 1$$

$$\alpha + \beta = -m$$

$$P = -2m$$

$$S = -m$$

$$\alpha + (\alpha + \beta)\beta = 1$$

$$\alpha^2 + \alpha + \beta + \beta^2 = 1 \rightarrow S - 2P + P = S - P = m^2 + 2m = 1 \rightarrow (m+1)(m-1) = 1$$

$$\alpha + \beta = S - 2P = m^2 + 4m$$

$$m = 1, -5$$

$$f(m) = \max_{x \in \mathbb{R}} \{ \varepsilon m + \frac{m^2}{2} + v \}$$

45?

جوابه ۵ - ۱

$$v = -\frac{D}{\varepsilon a} = -\left(\frac{b^2 - \varepsilon a c}{\varepsilon a} \right)$$



$$v = \frac{b + \sqrt{D}}{2a}$$

$$y = 14 - \varepsilon(m) \left(\frac{m+12}{\varepsilon} \right) \rightarrow y = 14 - \varepsilon(m)(m+12) = \frac{\varepsilon m^2 - \varepsilon m + 14}{\varepsilon}$$

$$m^2 + 12m - \varepsilon = 0 \quad (5)$$

$$\frac{-D}{\varepsilon a} = \frac{\varepsilon m^2 - \varepsilon m - 14}{\varepsilon m} = 1 \rightarrow \varepsilon m^2 + \varepsilon m - 14 = \varepsilon m \rightarrow \varepsilon m^2 - \varepsilon m - 14 = 0$$

$$\rightarrow m = 2 \rightarrow \varepsilon m^2 - \varepsilon m + 9 \rightarrow p_1 \frac{9}{\varepsilon} > 0 \quad \text{و } \frac{9}{\varepsilon}$$

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

$$m = -1 \rightarrow -\varepsilon m^2 - \varepsilon m + 9 \rightarrow p = -\varepsilon \quad \text{و } \frac{9}{\varepsilon}$$

$$m = \varepsilon, -\varepsilon$$

$$y = -\varepsilon m^2 - \varepsilon m + 9 \rightarrow y = \varepsilon m^2 + \varepsilon m - 14 \rightarrow (m + \frac{1}{2})(m - \frac{1}{2}) = (m - \frac{1}{2})(m + \frac{1}{2}) \rightarrow m = \frac{1}{2}$$

- 10

$$\varepsilon a^2 - 4a + c - 14a - \varepsilon = 0 \rightarrow (\varepsilon a^2 - \varepsilon a - 14a - \varepsilon) = 0 \quad (m - \frac{1}{2})(a + \frac{1}{2}) = 0 \rightarrow a = \frac{1}{2}, -\frac{1}{2}$$

$$a = 1 \rightarrow a = 1, 4$$

$$a = \frac{1}{4} \rightarrow a = 1, \frac{1}{4}$$

$$S = +(\varepsilon a + \varepsilon) = -\frac{\varepsilon}{\varepsilon} + \varepsilon = \frac{1}{\varepsilon} \rightarrow \frac{1}{\varepsilon} + \frac{1}{\beta} = \frac{1}{\varepsilon} \rightarrow \beta = \frac{\varepsilon}{\varepsilon}$$

$$y = a(m - h_0)^2 + k \rightarrow y = a(m - r)^2 + y \quad (2)$$

$$\frac{1}{a} + \frac{1}{\beta} = \frac{4+13}{9.13} = \frac{1}{-1} = -1 \rightarrow \frac{1}{\beta} = -1 \rightarrow \beta = -1$$

$$\varepsilon = \varepsilon a + y \rightarrow a = \frac{-1}{\varepsilon}$$

$$y = -\varepsilon(m - r)^2 + y$$

$$y = -\varepsilon m^2 + \varepsilon(m - \varepsilon + y) = -\varepsilon m^2 + \varepsilon m + \varepsilon$$

$$\varepsilon^2 - \varepsilon m - 14 = 0$$