

$y = \frac{-\Delta}{\epsilon a} = \frac{12\epsilon - 4(n)(am-1)}{\epsilon m} = \frac{m(am-1)-4}{m} = 2 \rightarrow am^2 - 4 - m = 2m$ $\rightarrow am^2 - 4 - m - 2m = 0 \rightarrow m^2 - 3m - 4 = 0 \rightarrow (m-4)(m+1) = 0 \rightarrow m = 4, m = -1$ $\rightarrow y = 2m^2 - 3m + 12$ $x = \frac{-b}{a} = \frac{12}{4} = 3$ پس جوابها a است، b نیز $\frac{12}{4}$ است	6
$\alpha + \beta = -\gamma a - 1, \alpha \beta = \gamma a - 1$ $a^2 = \alpha \beta = \gamma a - 1$ $a^2 - \gamma a + 1 = 0 \rightarrow (a-1)^2 = 0 \rightarrow a = 1$ $a = 1 \rightarrow m^2 + \epsilon m + 1 = 0 \rightarrow \Delta = 16 - 4 \geq 12 \rightarrow \Delta > 0$ دو ریشه دارد	7
$x^2 = t \rightarrow t^2 - \sqrt{t} - 2 = 0 \rightarrow \Delta > 0 \rightarrow 49 - 4(-1) = 49$ $t_1, t_2 = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{\sqrt{t}}{2} \rightarrow x_1 + x_2 = \sqrt{\frac{\sqrt{a} \sqrt{49}}{2}}, -\sqrt{\frac{\sqrt{a} \sqrt{49}}{2}}$ $S = x_1 + x_2 = 0$ $P = x_1 \cdot x_2 = -\left(\frac{\sqrt{a} \sqrt{49}}{2}\right) \rightarrow r p^2 = \frac{r}{2} p + \frac{r}{2} = r p^2 = 2 \left(-\left(\frac{\sqrt{a} \sqrt{49}}{2}\right)\right)^2$ $= 49 + \sqrt{49}$	8
$\text{ent} \left \begin{array}{l} x = \frac{-2}{rk} = \frac{r}{k} \\ y = k \left(\frac{r}{k} \right)^2 - \epsilon \left(\frac{r}{k} \right) - 4 = -\frac{\epsilon}{k} - 4 \end{array} \right. \Rightarrow y = \epsilon x^2 \text{ است}$ $-\frac{\epsilon}{k} - 4 = -\epsilon \left(\frac{r}{k} \right) - 4 \rightarrow \frac{\epsilon}{k} = 2 \rightarrow k = 2$ $y = \frac{-2}{k} - 4 = -1$	9
$-m^2 + mn + 1 = -n - n \rightarrow -m^2 + (n+1)n + 1 + n = 0$ $\rightarrow \Delta < 0 \rightarrow b^2 - 4ac < 0 \rightarrow (n+1)^2 - 4(-n)(n+1) < 0$ $\rightarrow m^2 + 1 + n + \epsilon m^2 + \epsilon m = 2m^2 + 4m + 1 > 0 \rightarrow (2m+1)(m+1) < 0 \rightarrow -1 < m < -\frac{1}{2}$ در این بازه وجود ندارد	10