

$$y = -ax^2 + bx + c$$

$$\text{max } 2V \Rightarrow -\frac{\Delta}{\epsilon a} = V \Rightarrow \frac{b^2 - 4ac}{4a} = V \Rightarrow b^2 - 4 \cdot 1 \cdot 12 = 14 \Rightarrow b = \pm 4$$

$$f(m) = a \epsilon + m^2 + c \xrightarrow{\text{نقطه}} t^2 + 2t + 12 = 0$$

$$\Rightarrow \Delta = b^2 - 4ac \rightarrow \epsilon - 12 = -1 < 0$$

(بندار) $\Delta < 0$

$$f(m) = (\epsilon - m^2) - 2(\epsilon - m^2) - 12$$

$$\xrightarrow{\epsilon - m^2} t^2 - 2t - 12 = 0 \rightarrow \left(\frac{t}{2} - 1\right)\left(t + 2\right) = 0$$

$$\epsilon - m^2 = 0 \rightarrow m^2 = 12 \Rightarrow m = \pm \sqrt{12}$$

$$4m^2 - 14m + m^2 = 0$$

$$5m^2 - 14m = 0 \Rightarrow m(5m - 14) = 0$$

$$S = -\frac{b}{a} = \frac{14}{5} = 2.8 = \alpha + \beta + \gamma \Rightarrow \boxed{\alpha = 1, \beta = 1, \gamma = 0.8}$$

$$P = \frac{c}{a} = \frac{m}{5} \Rightarrow \boxed{m = 14}$$

$$4m^2 - 14m + m^2 = 0$$

$$2\alpha - \beta = 4$$

$$S = -\frac{b}{a} = 2 \Rightarrow \alpha + \beta = 2$$

$$3\alpha = 4 \Rightarrow \alpha = \frac{4}{3}, \beta = 0$$

$$P = \frac{c}{a} = \frac{m-1}{3} = 2 \Rightarrow m-1 = 6 \Rightarrow \boxed{m = 7}$$

$$-m^2 + \epsilon m + m^2 - 2 = 0 \Rightarrow \text{آوردن به یک شکل با روش مربع کامل}$$

$$m^2 - 2 = m \Rightarrow m^2 - m - 2 = 0 \Rightarrow (m-2)(m+1) = 0$$

$$\Rightarrow m^2 + m - 2 = 0 \Rightarrow (m+2)(m-1) = 0$$

(بندار) $\Delta > 0$

$$-m^2 + \epsilon m - 1 = 0 \Rightarrow \Delta > 0$$

$$x^2 - m x + 12 = 0$$

$$\alpha \beta = 12$$

m?

$$P = \frac{C}{a} \cdot 12 = \alpha \cdot \beta$$

$$\frac{\alpha \beta}{\alpha \beta} = \frac{\Sigma}{12} = \beta \rightarrow \alpha = \frac{9}{\beta}$$

$$S = \frac{9}{\Sigma} + \frac{\Sigma}{12} = \frac{12 + \Sigma^2}{12} \cdot \frac{\Sigma}{12} = -\frac{b}{a} = m = \frac{12 \cdot 12}{12}$$

$$x^2 - \Sigma x + m = 0$$

$$x^2 - \Sigma x + m = 0$$

$$S = -\frac{b}{a} \cdot 12 = \alpha + \beta \rightarrow \alpha = 1, \beta = 12$$

$$P = \frac{C}{a} \cdot m = 1 \times 12 = 12 = m$$

$$x^2 - \Sigma x + 12 = 0$$

$$\alpha + \frac{1}{\alpha} = \Sigma$$

در معادله $\alpha + \frac{1}{\alpha} = \Sigma$ ضرب کنیم در α

$$\alpha P = \frac{C}{a} \cdot 12 = \alpha \cdot \beta \rightarrow \beta = \frac{12}{\alpha} \Rightarrow \beta = \frac{1}{\alpha} \quad (1)$$

$$\alpha + \frac{1}{\alpha} = \Sigma \xrightarrow{(1)} \alpha + \beta = \Sigma = 12 \Rightarrow \alpha = 12 - \beta = 12 - \frac{1}{\alpha} \Rightarrow \alpha^2 - 12\alpha + 1 = 0$$

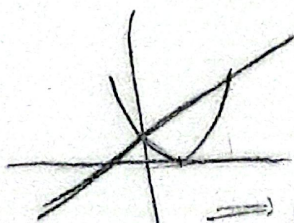
$$h(t) = -1.5t^2 + 4.5t$$

max?

$$h(t) = -1.5t^2 + 4.5t = 0 \Rightarrow t = 0 \text{ یا } t = 3$$

$$\max = -\frac{\Delta}{2a} = \frac{4.5^2}{2 \cdot 1.5} = 6.75$$

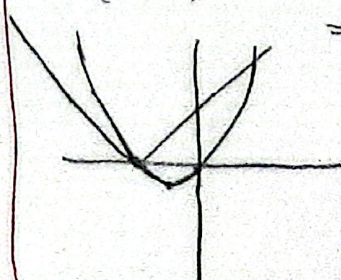
$$(n-1)^2 = 2n+1$$



نقطه

$$n=0 \text{ یا } n=1$$

$$n^2 + 2n = 1 \Rightarrow n^2 + 2n - 1 = 0$$



$$\Rightarrow \begin{cases} n = -1 \\ n = 1 \end{cases}$$