

$$y = a(n+1)^2 + 9 \xrightarrow{(1,1)} a(4)^2 + 9 = 1 \Rightarrow 14a = -8 \Rightarrow a = -\frac{4}{7}$$

$$y = -\frac{4}{7}(n+1)^2 + 9 \Rightarrow -\frac{4}{7}n^2 - \frac{4}{7}n + 9\frac{5}{7} \Rightarrow y = -\frac{4}{7}n^2 - \frac{4}{7}n + 14\frac{5}{7}$$

سوال ۲

$$\Delta > 0 \Rightarrow m^2 - 12m - 48 > 0 \Rightarrow \frac{-(-12) \pm \sqrt{(-12)^2 - 4(1)(-48)}}{2(1)}$$

$$\frac{(m-12)(m+4)}{+12 \leftarrow \quad \quad \quad \rightarrow -4}$$

$(-\infty, -4) \cup (12, +\infty)$ I

$$P > 0 \Rightarrow \frac{m+4}{2} > 0 \Rightarrow m+4 > 0 \Rightarrow m > -4 \text{ II}$$

$$S > 0 \Rightarrow -\frac{m}{2} > 0 \Rightarrow \frac{m}{2} < 0 \Rightarrow m < 0 \text{ III}$$

I, II, III $\Rightarrow (-4, -4)$ ✓

سوال ۳

$$S = \frac{1}{P} \Rightarrow \frac{-2m+1}{2} = \frac{3}{2-m} \Rightarrow 9 = 2m^2 - 4m + 1 \Rightarrow 2m^2 - 4m - 8 = 0$$

$$2m^2 - 4m - 8 = 0 \Rightarrow m = \frac{4 \pm \sqrt{16 + 64}}{4} = \frac{4 \pm \sqrt{80}}{4} = \frac{4 \pm 4\sqrt{5}}{4} = 1 \pm \sqrt{5}$$

-1×0.06 ✓

$\Delta < 0$ ✓

سوال ۴

$$x^2 - 4 - n = 0 \Rightarrow n_1 + n_2 = 4 \quad / \quad n_1, n_2 = -4$$

$$P = (x^2 + \frac{1}{m_1})(x^2 + \frac{1}{m_2}) = (x^2 + \frac{1}{m_1})^2 + \frac{1}{m_1} + \frac{1}{m_2} = -40, 20$$

$$S = x^2 + \frac{1}{m_1} + x^2 + \frac{1}{m_2} = \frac{(x^2 + \frac{1}{m_1})^2}{(m_1 + m_2)^2} + \frac{m_2 + m_1}{m_1 m_2} = \frac{1}{9} + \frac{1}{-4} = -\frac{5}{12}$$

نکته $\Rightarrow x^2 - 12, 20 \Rightarrow x = 4, -4$ ✓

$$n\sqrt[n]{n} + 1 + \sqrt[n]{n^2} - \sqrt[n]{n^2} - \frac{1}{\sqrt[n]{n^2}} - 1 = 2\sqrt[n]{n} \rightarrow \text{سوال ۲}$$

$$2\sqrt[n]{n} - \frac{1}{\sqrt[n]{n^2}} - 2\sqrt[n]{n} = 0$$

$$x\sqrt[n]{n^2} \rightarrow n^2 - 1 - 2n = 0 \rightarrow \frac{2 \pm \sqrt{4}}{2} \rightarrow \frac{2+2}{2} \rightarrow 1+1 \rightarrow 2 \quad \left\{ \begin{array}{l} + \\ - \end{array} \right.$$

$$\frac{2-2}{2} \rightarrow 1-1 \rightarrow 0 \quad \left\{ \begin{array}{l} + \\ - \end{array} \right.$$

$$n_1 = 2n_2$$

سوال ۲

$$n_2 \times n_2 \Rightarrow n_2^2 = \frac{9}{4} \quad n_2 = \frac{3}{2} \quad n_1 = 3$$

$$3 + \frac{3}{2} = \frac{9}{2} \quad a = 1$$

$$1 - (-1) = 1$$

$$n_2 = -\frac{3}{2} \quad n_1 = -3$$

$$-3 - \frac{3}{2} = -\frac{9}{2} \quad a = -1$$

$$y = an^2 + (r+ra)n \quad I \ a > 0 \quad \leftarrow \text{min}$$

سوال ۲

$$P = \dots \rightarrow S > 0 \quad \frac{-r-ra}{a} > 0$$

نمبر از خاصیت ۲
بزرگ

$$(-\frac{r}{a}, 0) \xrightarrow{I, II} I \cap II = \emptyset$$

همواره از خاصیت ۲ می گذرد

$$\frac{-b}{ra} \rightarrow \frac{r}{-r} = \frac{-a}{r} \rightarrow a=r$$

وال

$$a \cdot b = r \cdot \epsilon = r$$

$$y=1 \xrightarrow{\text{علاقة}} n^r + m + 1 - b = n^r + m - r \quad b = \epsilon$$

$$ra n^r + an - a = 0 \xrightarrow{\text{نقسم}} n_1, n_2 \rightarrow n_1 + n_2 = \frac{-a}{ra} = \frac{-1}{r} \text{، حال}$$

$$r n^r - a n + b = 0 \rightarrow (n_1 + \dots + d), (n_2 + \dots + d) \rightarrow S = \frac{-1}{r} + 1 = \frac{1}{r} = \frac{a}{r} \quad a=1$$

$$\rightarrow n^r + m - a = 0 \rightarrow \frac{-1 \pm \sqrt{\epsilon^2}}{\epsilon} \rightarrow \begin{cases} \frac{r}{r} \text{ (مستبعد)} \\ -r \end{cases} \quad r, 1/\Delta$$

$$p = -r = \frac{b}{r} \quad b = -r \quad \left[\frac{ab}{\epsilon} \right] \rightarrow \left[\frac{-r}{\epsilon} \right] \rightarrow -r$$

وال ١.

$$\left\{ \begin{array}{l} \text{نقسم} \\ \text{نقسم} \end{array} \right\} n_1, n_2$$

$$n^r + m - r m = 0 \rightarrow n \times n_r = -r m$$

$$n_r = \frac{-r m}{n}$$

$$n^r + m + m = 0$$

$$n \times n_r = m \rightarrow n_r = \frac{m}{n}$$

$$n^r + m + m = n^r + m - r m \quad \epsilon n = \epsilon m \quad n = -m$$

$$n_r - n_r = \frac{-r m}{n} - \frac{m}{n} = \frac{-r m}{n} = \epsilon$$