

الف) $m^2 - 5m - 24 \rightarrow (m-9)(m+4) \rightarrow \alpha, \beta = \frac{9}{4} \text{ و } -\frac{4}{9}$
 ب) $m^2 - 14m + 9 \rightarrow (m-9)(m+1) \rightarrow \alpha, \beta = 9 \text{ و } -\frac{1}{9}$
 ج) $m^2 - 5m - 4 \rightarrow (m-4)(m+1) \rightarrow \alpha, \beta = \frac{4}{5} \text{ و } -\frac{5}{4}$
 د) $m^2 - 5m - 24 \rightarrow (m-1)(m+3) \rightarrow \alpha, \beta = 1 \text{ و } -\frac{3}{1}$

الف) $(m-7)(m+2) \rightarrow \alpha, \beta = 7 \text{ و } -2$
 ب) $m^2 - 13m + 6 \rightarrow \alpha, \beta = -1 \text{ و } -\frac{6}{-1} \rightarrow 1+3=4$
 ج) $\Delta < 0 \rightarrow$ ریشه ندارد $\Delta = 25 - 4 \times 1 \times 3 = -1 = b^2 - 4ac$
 د) $\Delta = 9 + (4 \times 3 \times 1) = 25 \quad \alpha, \beta = \frac{-3 \pm \sqrt{25}}{4} = \frac{-3 \pm 5}{4}$

$B \times B = \{(1,2), (2,3), (3,2), (2,1), (3,3)\}$
 $A \times B = \{(1,2), (1,3), (2,2), (2,3), (3,2), (3,3)\}$
 $A \times B - B^T = \{(1,2), (1,3)\}$

الف) $m^2 = m+2 \rightarrow m^2 - m - 2 = 0 \rightarrow m = 2, -1$
 $m \neq 2 \rightarrow m = -1$
 ب) $m \neq 2 \rightarrow m = 2, -1$
 $m \neq -1, 2 \rightarrow \emptyset$

الف) $a^2 = 3a - 2$
 $a^2 - 3a + 2 = 0$
 $a = \begin{cases} 1 \\ 2 \end{cases}$ نقص
 ب) $y^2 - 6y = y^2 - 6y$
 ج) $a^2 - 3a + 2 = 0$
 د) $a = \begin{cases} 1 \\ 2 \end{cases}$ نقص

$$\text{II} \rightarrow a^m + b \xrightarrow{1} a + b = 0 \Rightarrow a = 1 \Rightarrow a \times b = -9 \text{ (جواب)} \\ \text{III} \rightarrow a + b \xrightarrow{r} a + b = 1 \Rightarrow b = -1 \Rightarrow a \times b = -9 \text{ (جواب)}$$

$$\text{if } n=1 \Rightarrow a + b = n^2 - 1$$

$$\text{if } n=2 \Rightarrow a + b = n^2$$

$$\text{if } n=k \Rightarrow r_{n-1} = \varepsilon - r_n \Rightarrow \omega n = v \Rightarrow n = \frac{v}{\omega} = k$$

الف) طرزا به شکل $y^2 - y = 0$ تابع $y^2 - y = 0$ با $n=1$ $\times$ $y^2 - y = 0$ $\Rightarrow y = 0$ $\Rightarrow |y| = 1 \Rightarrow y = \pm 1$ $\times$ (ب)

$$n=0 \Rightarrow |y|=1 \Rightarrow y = \pm 1 \quad \times$$

$$\text{جواب} 1 - \cos n \geq 0 \rightarrow 1 \geq \cos n \rightarrow n = 0 \rightarrow |y| = \frac{1}{r} \rightarrow y = \pm \frac{1}{r} \quad \times \quad (ج)$$

$$y^2 + (n+1)^2 = 0 \rightarrow y = 0, n = -1 \quad \text{نقشه} \quad \text{تابع} \quad (د)$$

الف) $\text{if } (m_1, y_1) \in P \Rightarrow \text{if } n_1 = n_r \Rightarrow y_1 = y_r$ $\left. \begin{array}{l} \text{if } (m_2, y_2) \in P \\ \text{if } (m_r, y_r) \in P \end{array} \right\} \Rightarrow \left. \begin{array}{l} -n_1^2 - r_{m_1} - 2 = \sqrt{y_1} \\ -n_r^2 - r_{m_r} - 2 = \sqrt{y_r} \end{array} \right\} \Rightarrow$

$$y_1^2 + r_{y_1} = y_r^2 + r_{y_r} \quad \left. \begin{array}{l} \sqrt{y_1} = \sqrt{y_r} \Rightarrow y_1 = y_r \quad \checkmark \\ \sqrt{y_r} = \sqrt{y_1} \Rightarrow y_r = y_1 \quad \checkmark \end{array} \right\}$$

$$(y_1 - y_r)(y_1^2 + y_1 y_r + y_r^2 + r) = 0 \rightarrow \left\{ \begin{array}{l} y_1 = y_r \\ P = 0 \rightarrow y_1 = \frac{-y_r \pm \sqrt{\Delta}}{r} \end{array} \right. \rightarrow \text{تابع} \quad (ب)$$

$$\Delta = y_r^2 - 4y_r^2 - 1 = -3y_r^2 - 1 \rightarrow \sqrt{\Delta} = \frac{1}{2} \rightarrow y_1 = y_r \quad \checkmark$$

الف) $n=1 \rightarrow y=0$ $\Rightarrow$ $\text{تابع} \quad \text{جواب}$

$$\rightarrow \sqrt{\frac{m}{y}} + \sqrt{\frac{y}{m}} = 1 \quad \text{تابع} \quad \checkmark$$

$$\frac{m}{y} = \frac{y}{m} = 1 \Rightarrow y = m =$$