

نام و نام خانوادگی: شماره: کلاس: پاسنامه تشریحی تکلیف شماره: 11-1

الف) $x^2 - 5x - 24 = 0 \Rightarrow (x-9)(x+4) = 0 \Rightarrow \begin{cases} x_1 = 9 \rightarrow \frac{9}{9} = 1 \\ x_2 = -4 \rightarrow \frac{-4}{4} = -1 \end{cases}$

ب) $x^2 - 11x - 9 = 0 \Rightarrow (x-9)(x+1) = 0 \Rightarrow \begin{cases} x_1 = 9 \rightarrow \frac{9}{9} = 1 \\ x_2 = -1 \rightarrow \frac{-1}{1} = -1 \end{cases}$

ج) $x^2 - 5x - 12 = 0 \Rightarrow (x-9)(x+2) = 0 \Rightarrow \begin{cases} x_1 = 9 \rightarrow \frac{9}{9} = 1 \\ x_2 = -2 \rightarrow \frac{-2}{2} = -1 \end{cases}$

د) $x^2 - 5x - 24 = 0 \Rightarrow (x-9)(x+4) = 0 \Rightarrow \begin{cases} x_1 = 9 \rightarrow \frac{9}{9} = 1 \\ x_2 = -4 \rightarrow \frac{-4}{4} = -1 \end{cases}$

الف) $(x-7)(x+2) \Rightarrow \begin{cases} x_1 = 7 \\ x_2 = -2 \end{cases}$

ب) $x^2 + 5x + 6 = 0 \Rightarrow (x+2)(x+3) = 0 \Rightarrow \begin{cases} x_1 = -2 \\ x_2 = -3 \end{cases}$

ج) $(x+1)(x+2) \Rightarrow \begin{cases} x_1 = -1 \\ x_2 = -2 \end{cases}$

د) $x^2 + 5x + 6 = 0 \Rightarrow (x+2)(x+3) = 0 \Rightarrow \begin{cases} x_1 = -2 \\ x_2 = -3 \end{cases}$

$A \times B \Rightarrow \{(1,2), (1,3), (2,2), (2,3), (3,2), (3,3)\}$ $B^2 \Rightarrow \{(2,2), (2,3), (3,2), (3,3)\}$

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

الف) $m^2 = m+2 \Rightarrow m^2 - m - 2 = 0 \Rightarrow \begin{cases} m_1 = 2 \\ m_2 = -1 \end{cases}$

ب) $m^2 = m+2 \Rightarrow m^2 - m - 2 = 0 \Rightarrow \begin{cases} m_1 = 2 \\ m_2 = -1 \end{cases}$

$a^2 = 2a - 2 \Rightarrow a^2 - 2a + 2 = 0 \Rightarrow \begin{cases} a_1 = 1 \\ a_2 = 2 \end{cases}$

$$x=1 \Rightarrow x^2-1=a x+b \Rightarrow 0=a+b \quad x=2 \Rightarrow a x+b=x^2 \Rightarrow 2a+b=1$$

$$\begin{cases} a+b=0 \\ 2a+b=1 \end{cases} \Rightarrow \begin{cases} a=1 \\ b=-1 \end{cases}$$

$$a \times b = 1 \times -1 = -1$$

$$x=k \Rightarrow 2x-2 = 4-2x \Rightarrow 2k-2 = 4-2k \Rightarrow 4k=6 \Rightarrow k=\frac{3}{2}$$

$$\text{الف) } x=1 \Rightarrow y^2-y=0 \Rightarrow y(y-1)=0 \Rightarrow \begin{cases} y=0 \\ y=1 \end{cases}$$

$$\text{ب) } x=0 \Rightarrow |y|=2 \Rightarrow \begin{cases} y=2 \\ y=-2 \end{cases}$$

$$\text{ج) } \cos x = 0 \Rightarrow |y|=1 \Rightarrow y=1 \text{ or } y=-1$$

$$\text{د) } y^2 + (x+1)^2 = 0 \Rightarrow y=0, x=-1$$

$$\text{الف) } \sqrt{y} = 2x-2-x^2 \Rightarrow y = (2x-2-x^2)^2$$

$$\text{ب) } y^2 + 2y = 2x \Rightarrow \begin{cases} y_1^2 + 2y_1 = 2x \\ y_2^2 + 2y_2 = 2x \end{cases} \Rightarrow y_1^2 - y_2^2 + 2y_1 - 2y_2 = 0 \Rightarrow (y_1 - y_2)(y_1 + y_2 + 2) = 0 \Rightarrow y_1 = y_2$$

$$\text{الف) } x=0 \Rightarrow 0 \times \sin y = y \times \sin 0 \Rightarrow \sin 0 = 0 \Rightarrow 0=0$$

$$\text{ب) } \sqrt{\frac{x}{y}} = \frac{1}{\sqrt{\frac{x}{y}}} \Rightarrow t = \sqrt{\frac{x}{y}} \Rightarrow t + \frac{1}{t} = 2 \Rightarrow t^2 - 2t + 1 = 0 \Rightarrow (t-1)^2 = 0 \Rightarrow t=1$$

$$\sqrt{\frac{x}{y}} = 1 \Rightarrow \frac{x}{y} = 1 \Rightarrow x=y, (x \neq 0)$$

$$\text{ج-۲)} \quad 2n^2 + 2n + 3 = 0 \xrightarrow{a+c=b} \rightarrow n_1 = -1$$

$$\rightarrow n_2 = \frac{-c}{a} = -\frac{3}{2}$$

$$\text{ج-۲)} \quad x^2 + 2x + 3 = 0 \xrightarrow{\text{روش دلتا}} \Delta = (2)^2 - 4(1)(3) = -8 < 0$$

معادله ریشه حقیقی ندارد!

$$\text{ج-۴)} \quad (3, m^2) \text{ و } (3, m+2) \leadsto m^2 = m+2 \leadsto m^2 - m - 2 = 0$$

$$m = 2 \rightarrow (2, 1), (2, 4) \quad \times$$

$$m = -1 \rightarrow (-1, 4), (-1, 3) \quad \times$$

به ازای هیچ مقدار m عبارت تکرر نیست!