

تکلیف ۱

به نام خدا

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باز در هر روز

الف) $4x^2 - 5x - 4 = 0$

$4x^2 - 5x - 4 = 0$
 $\swarrow$
 -4×4

$(x-4)(x+1) = 0$

$x = \frac{4}{4} = 1$
 $x = \frac{-1}{4} = -\frac{1}{4}$

ب) $3x^2 - 11x - 4 = 0 \Rightarrow x^2 - 11x - 4 = 0$
 $\swarrow$
 $-4 \times 1 \Rightarrow$

$x = \frac{4}{1} = 4$
 $x = \frac{-1}{1} = -1$

ج) $4x^2 - 11x - 12 = 0 \Rightarrow x^2 - 11x - 12 = 0$
 $\swarrow$
 $-12 \times 1 \Rightarrow$

$x = \frac{12}{1} = 12$
 $x = \frac{-1}{1} = -1$

د) $2x^2 - 5x - 12 = 0 \Rightarrow x^2 - 5x - 12 = 0$
 $\swarrow$
 $-12 \times 1 \Rightarrow$

$x = \frac{12}{1} = 12$
 $x = \frac{-1}{1} = -1$

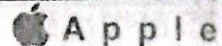
الف) $(x-5)(x+2) = 0 \Rightarrow x_1, 2 = 5, -2$

ب) $a+c=b \Rightarrow x_1, 2 = -1, \frac{b}{a}$

ج) $\Delta = b^2 - 4ac = 4 - 4(1)(1) = 0 \Rightarrow$ یک ریشه دارد

د) $\Delta = 9 - 4(-1)(4) = 25$ $x_{1,2} = \frac{-1 \pm \sqrt{25}}{4}$
 $4 \times 1 = 4$

$x_{1,2} = \frac{-b \pm \sqrt{\Delta}}{2a}$
 $x_1 = \frac{-1 + \sqrt{25}}{4}$
 $x_2 = \frac{-1 - \sqrt{25}}{4}$



Date: Sub:

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

$$B \times B = \{(1,1)(1,2)(1,3)(1,4)\}$$

$$A \times B - B^T = \{ (1, 2), (1, 3), (1, 4), (2, 1), (2, 2), (2, 3), (2, 4), (3, 1), (3, 2), (3, 3), (3, 4), (4, 1), (4, 2), (4, 3), (4, 4) \}$$

ج) $m^T = m + T \Rightarrow m^T - m - T = 0 \Rightarrow m = -19T$

if $m = 1 \Rightarrow (1, 1)(1, 1) \Rightarrow X_{\text{بل}}$

$$m = -1$$

~) $m^r = m + r \Rightarrow m^r - m - r = 0 \Rightarrow m = -1, r = 1 \Rightarrow m \neq r \rightarrow$

$$m \neq -1 \xrightarrow{\quad} (-1, r)(-1, \epsilon)$$

ماتریس

$$(1, 1)(1, 2)$$

$$a^2 = 2a - 2 \Rightarrow a^2 - 2a + 2 = 0 \quad a = 1, 2 \quad [a=2] \quad (5)$$

if $a=1 \Rightarrow (a^2, 2a+2) = (1, 4)$ و $if \ a=2 \Rightarrow (2, 1) \checkmark$

$$x=1 \Rightarrow x^2-1 = 1-1=0 \quad x=2 \Rightarrow x^2=4 \quad (9)$$

$$\Rightarrow ax+b = 2a+b \Rightarrow ax+b = 2a+b$$

$$a \times b = -9 \quad \begin{cases} 2a+b=1 \\ a+b=0 \end{cases} \Rightarrow \begin{cases} a=1 \\ b=-1 \end{cases}$$

$$x=k \Rightarrow 2k-2 = 4-2k \Rightarrow k = \frac{3}{2} \quad (11)$$

الف) $y'' - y' = 0 \Rightarrow x \text{ تابع } \Rightarrow \text{تابع نسبت}$ (12)

محل نقص $\rightarrow$ if $x=1 \Rightarrow y'' - 6y = 0 \Rightarrow y(y'' - 6) = 0 \Rightarrow y = \begin{cases} 0 \\ \pm\sqrt{6} \end{cases}$

ب) if $x=0 \Rightarrow y = \pm 2 \Rightarrow \text{تابع نسبت}$

ج) if $\cos x = 0 \Rightarrow y = \pm 1 \Rightarrow \text{تابع نسبت}$

$$\rightarrow x = \frac{2\pi}{p} + \frac{2\pi}{p}$$

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

الف) $\begin{cases} y_1'' = -x_1^2 + 2x_1 - 2 \\ y_2'' = -x_2^2 + 2x_2 - 2 \end{cases} \Rightarrow \begin{cases} x_1=x_2 \\ y_1=y_2 \end{cases} \Rightarrow y_1=y_2 \Rightarrow \text{تابع نسبت} \quad (13)$

ب) $\begin{cases} y_1'' + 2y_1 = 2x_1 \\ y_2'' + 2y_2 = 2x_2 \end{cases} \Rightarrow \begin{cases} x_1=x_2 \\ y_1'' + 2y_1 = y_2'' + 2y_2 \end{cases} \Rightarrow y_1'' - y_2'' = 2y_2 - 2y_1$

if $y_1 \neq y_2 \Rightarrow (y_1 - y_2)(y_1'' + y_1' + y_1 y_2) = 2(y_2 - y_1)$

$$\frac{y_1''}{x^2} + \frac{y_1'}{x} + \frac{y_1 y_2 + 2}{y_1 x} = 0 \Rightarrow \Delta = y_1'' - \frac{1}{x}(y_1' + 1) = -1 y_1'' - 1 =$$

$$C = y_1'' + 2$$

$[y_1 = y_2]$ پس این معادله را می توانیم بنویسیم $\Delta = 0$ است $\Rightarrow$ $(-1 y_1'' + 1)$

الف) $x = 2\pi \Rightarrow 2\pi \times \sin y = y_1 \sin 2\pi \Rightarrow \sin y = 0 \Rightarrow y = \{k\pi\}$ (14)

تابع نسبت $\Leftarrow$ Arman

$$\rightarrow \sqrt{\frac{x}{y}} = t \Rightarrow t + \frac{1}{t} = r \Rightarrow t^{r+1} - rt = 0$$

$$(t-1)^r = 0 \Rightarrow t=1$$

$$\Rightarrow x=y \Rightarrow \text{تساوي}$$

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