

۱) $x^2 - 5x - 14 = 0 \rightarrow x^2 - 5x - 7 \times 2 = 0 \rightarrow (x-7)(x+2) \rightarrow x = 7 \vee x = -2$

۲) $3x^2 - 11x - 2 = 0 \rightarrow x^2 - 11x \times \frac{1}{3} - \frac{2}{3} = 0 \rightarrow (x-12)(x+1) \rightarrow x = 12 \vee x = -1$

۳) $(4x^2 - 5x - 3) \times \frac{1}{4} = 0 \rightarrow x^2 - 5x \times \frac{1}{4} - \frac{3}{4} = 0 \rightarrow (x-6)(x+1) \rightarrow x = 6 \vee x = -1$

۴) $(2x^2 - 5x + 2) \times \frac{1}{2} = 0 \rightarrow x^2 - 5x \times \frac{1}{2} + 1 = 0 \rightarrow (x-1)(x+2) \rightarrow x = 1 \vee x = -2$

۱) $x^2 - 5x - 14 = 0 \rightarrow (x-7)(x+2) \rightarrow x = 7 \vee x = -2$

۲) $2x^2 + 5x + 2 = 0 \rightarrow x^2 + 5x \times \frac{1}{2} + 1 = 0 \rightarrow (x+2)(x+1) \rightarrow x = -2 \vee x = -1$

۳) $x^2 + 2x + 2 = 0 \rightarrow \Delta = b^2 - 4ac \rightarrow \Delta = 2^2 - 4(1)(2) = -4$ جواب ندارد.

۴) $3x^2 + 3x - 2 = 0 \rightarrow x^2 - 5x \times \frac{1}{3} - \frac{2}{3} = 0 \rightarrow x = \frac{-3 \pm \sqrt{33}}{6}$

$A \times B - B^T = ?$

① $A \times B \rightarrow \begin{Bmatrix} (1,2) \\ (2,3) \end{Bmatrix} \times \begin{Bmatrix} (2,3) \\ (3,2) \end{Bmatrix}$

② $B^T \rightarrow \begin{Bmatrix} (2,3) \\ (3,2) \end{Bmatrix}$

$\rightarrow \text{حاصل} \rightarrow \begin{Bmatrix} (1,9) \end{Bmatrix}$

۱) $f(x) = x^2 - m + 2 \rightarrow x^2 - m - 2 = 0 \rightarrow (x-2)(x+1) = 0 \rightarrow x = 2 \vee x = -1$

if $m = 2 \times$ $m = -1 \checkmark$

۲) $x^2 = m + 2 \rightarrow m = 2 \vee m = -1$

$\checkmark m = 2 \times$
 $m = -1 \times$

هیچ مقداری

$x^2 = 3x - 2 \rightarrow x^2 - 3x + 2 = 0 \rightarrow (x-2)(x-1) \rightarrow x = 2 \vee x = 1$

$\checkmark a = 2 \checkmark \rightarrow (1,4) (1,1) (4,1)$

$\checkmark a = 1 \rightarrow (1,1) (1,1) (1,4) \times$

اولی در $a = 1 \Rightarrow \vec{r} = a\vec{r} + b \rightarrow a+b=0$
 $\rightarrow a = -b$

دومی در $\Rightarrow 2a+b = 1$
 $a = 2 \Rightarrow 2 \times (-b) + b = 1 \rightarrow -2b + b = 1 \rightarrow b = -1$
 $a = -1 \rightarrow a \times b = (-95)$

ثالثی $q = k$ معادله
 $q = k \rightarrow 2k - r = 1 - 2k$
 $\rightarrow 2k = 1 \rightarrow k = \frac{1}{2}$

اول $a = 3 \rightarrow y^2 - 4y = 0 \rightarrow y(y-4) = 0$
 $y = 0$ یا $y^2 - 4 = 0 \rightarrow y^2 = 4 \rightarrow \pm 2 \rightarrow x$ نیست

ب) $a = 0 \rightarrow |y| = r \rightarrow y = \pm r$ نیست

ج) $y = \pm \sqrt{1 - \cos 2\alpha} \rightarrow a = \pi \rightarrow y = \pm \sqrt{2}$ نیست

د) $y^2 + (a+1)^2 = 0 \rightarrow y = 0, a = -1$ هست

اول $\sqrt{y} = ra - r - a^2 \rightarrow \begin{cases} \sqrt{y_1} + a^2 = ra - r \\ \sqrt{y_2} + a^2 = ra - r \end{cases} \rightarrow \sqrt{y_1} = \sqrt{y_2} + a^2$
 $\rightarrow \sqrt{y_1} = \sqrt{y_2} \xrightarrow{(\cdot)^2} y_1 = y_2$ هست

ب) $y^2 + ry = a^2 \rightarrow \begin{cases} y_1^2 + ry_1 = a^2 \\ y_2^2 + ry_2 = a^2 \end{cases} \rightarrow y_1^2 - y_2^2 + r(y_1 - y_2) = 0$
 $(y_1 - y_2)(y_1 + y_2 + r) = 0$
 $y_1 - y_2 = 0 \rightarrow y_1 = y_2$ هست

اول $a = 0 \rightarrow \cos \sin y = \cos \sin 0 \rightarrow 0 = 0$ هر y هست

ب) $\sqrt{\frac{a}{y}} = 2 \rightarrow 2 + \frac{1}{2} = r \sim 2^2 + 1 = r^2 \rightarrow 2^2 - 2 \cdot 2 + 1 = 0$
 $(2-1)(2-1) = 0$
 $\rightarrow (2-1)^2 = 0$
 $\rightarrow 2 = 1$

$\Rightarrow \sqrt{\frac{a}{y}} = 1 \rightarrow \frac{a}{y} = 1 \rightarrow a = y$ هست