

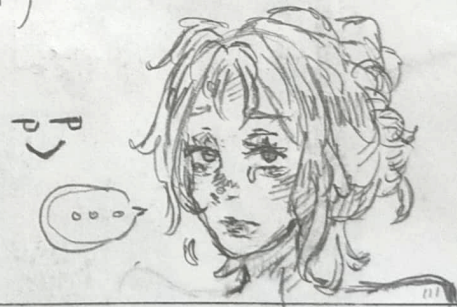
الف) $9x^2 - 5x - 4 = 0 \rightarrow x^2 - 8x - 12 = 0$ $(x-9)(x+4)$
 ب) $3x^2 - 8x - 3 = 0 \rightarrow x^2 - 8x - 9 = 0$ $(x-9)(x+1)$
 ج) $4x^2 - 2x - 3 = 0 \rightarrow x^2 - 2x - 12 = 0$ $(x-4)(x+2)$
 د) $2x^2 - 5x - 12 = 0$ $(x-8)(x+4)$

الف) $x^2 - 5x - 14 = 0 \rightarrow (x-7)(x+2) = 0$
 ب) $2x^2 + 5x + 3 = 0 \rightarrow x^2 + 5x + 4 = 0 \rightarrow (x+4)(x+1) = 0$
 ج) $x^2 + 2x + 3 = 0 \Rightarrow \Delta = 4 - 12 = -8 < 0 \rightarrow$ جواب ندارد
 د) $3x^2 + 3x - 2 = 0 \Rightarrow \Delta = 9 + 24 = 33 \rightarrow \frac{-3 \pm \sqrt{33}}{6}$

$A \times B \rightarrow (1, 2) \text{ و } (1, 3) \text{ و } (2, 3)$

$B \times B \rightarrow (2, 2) \text{ و } (2, 3) \text{ و } (3, 2) \text{ و } (3, 3)$

$A \times B - B^2 \rightarrow (1, 2) \text{ و } (1, 3)$



الف) $m^2 = m + 2 \rightarrow m^2 - m - 2 = 0$ $(m-2)(m+1)$ جواب
 ب) $m^2 = m + 2 \rightarrow m^2 - m - 2 = 0$ $(m-2)(m+1)$ جواب ندارد

$a^2 = 3a - 2 \rightarrow a^2 - 3a + 2 = 0 \rightarrow (a-2)(a-1)$ جواب

$$a=0 \text{ ازای } a \rightarrow 1-1 = a+b \rightarrow a+b=0$$

$$a=2 \text{ ازای } a \rightarrow 2a+b=1 \rightarrow a+a+b=1 \rightarrow a=1 \quad b=-1$$

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

۶

$$n=k \text{ عدد اول } \rightarrow 2k-3 = 4-3k \quad k=7 \quad k=\frac{7}{6}$$

۷

$$\text{الف) } n=1 \rightarrow y^3 - 4y = 0 \rightarrow y(y^2 - 4) = 0 \rightarrow y = 0, \pm 2$$

$$\text{ب) } n=1 \rightarrow |y|=2 \quad y = (\pm 2)$$

$$\text{ج) } |y| = \sqrt{1 - \cos n} \rightarrow -1 \leq \cos n \leq 1 \rightarrow \text{این عبارت همیشه مثبت است}$$

$$\text{د) } y^2 + (n+1)^2 = 0 \rightarrow \text{تساوی که عددی مثبت است}$$

۸

$$\text{الف) } \begin{cases} \sqrt[3]{y_1} = -n^2 + 2n - 2 \\ \sqrt[3]{y_2} = -n^2 + 2n - 2 \end{cases} \quad \sqrt[3]{y_1} = \sqrt[3]{y_2} \rightarrow y_1 = y_2 \rightarrow \text{تابع است}$$

$$\text{ب) } \begin{cases} y_1^3 + 2y_1 = an \\ y_2^3 + 2y_2 = an \end{cases} \quad y_1^3 + 2y_1 = y_2^3 + 2y_2 \rightarrow y_1^3 - y_2^3 + 2(y_1 - y_2) = 0 \rightarrow (y_1 - y_2)(y_1^2 + y_1y_2 + y_2^2 + 2) = 0$$

$$\text{الف) } n=0 \rightarrow y(\sin n) = 0(\sin y)$$

$$\sqrt{\frac{n}{y}} + \sqrt{\frac{y}{n}} = 2 \rightarrow \frac{n+y}{\sqrt{ny}} = 2 \rightarrow n - 2\sqrt{ny} + y = 0 \rightarrow (\sqrt{n} - \sqrt{y})^2 = 0 \rightarrow \sqrt{n} = \sqrt{y} \rightarrow n = y$$

تابع نیست

۱۰