

بابت بستری صلکین ت ۱۷/۲۵

الف) $(9, x+2y)$ و $(3x-y-4)$ $\rightarrow x+2y=-6 \rightarrow x=-2y-6 \rightarrow x=2$

$\rightarrow \frac{x}{y} = \frac{2}{-3}$

$\frac{1}{x} - \frac{1}{y} = -1 \rightarrow \frac{1}{x} + 1 = -1$ $\rightarrow \frac{1}{x} = -2 \rightarrow x = -\frac{1}{2}$

ب) $(-1, -3)$ و $(\frac{1}{x} - \frac{1}{y}, \frac{5}{x} - \frac{y}{y})$ $\rightarrow \frac{1}{x} - \frac{1}{y} = -1 \rightarrow \frac{1}{x} = -\frac{1}{y} - 1 \rightarrow x = -2$

$\rightarrow \frac{x}{y} = \frac{-2}{-1} = 2$

$\rightarrow -3 = 5(\frac{1}{y} - 1) - \frac{y}{y} \rightarrow -3 = \frac{5}{y} - 5 - \frac{y}{y}$
 $2 = \frac{5}{y} \rightarrow y = -1$

$f = \{(a, 2a), (a+1, 1), (1, -2), (2, b)\} \rightarrow f(a) + 2f(1) = 3f(1)$

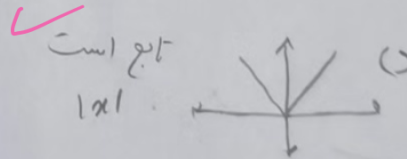
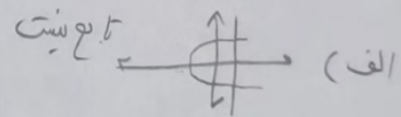
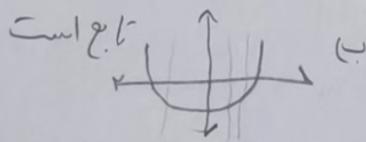
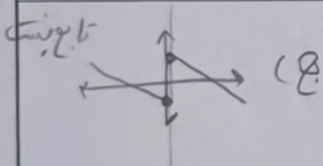
$\rightarrow a+1 = -2 \rightarrow a = -3$
 $\rightarrow \{(-3, -6), (1, -2), (1, -2), (2, b)\}$

$-4 + 2b = -4$
 $2b = 0 \rightarrow b = 0$

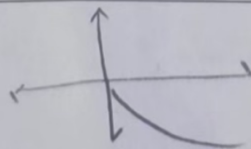
$f = \{(-1, m^2-3m), (3, 5), (-1, -2), (m+1, 2), (2, 4), (m^2+2, 4m+1)\}$

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

$m=1$
 $\rightarrow \{(-1, -2), (3, 5), (-1, -2), (2, 4), (2, 4), (3, 5)\}$



$y = -\sqrt{x+1}$



تابع است

$x = \frac{y}{\sqrt{1-y^2}}$ \rightarrow تابع نیست فقط در ۰ تا ۱

۱/۲۵

الف) $|y| = x \rightarrow y = \sqrt{x}$ تأويل

ب) $y'' + 2y' + 2y + x^2 + x = 0$

$y'' + 2y' = -(x^2 + x + 2y')$

تأويل

2

6

$f(x) = \frac{x^2 + 5x + 4}{x^2 + 2x + 3} \rightarrow \frac{(x+2)^2 + 1}{(x+1)^2 + 2} = \frac{(\sqrt{3})^2 + 1}{(\sqrt{3})^2 + 2} = \frac{4}{4} = \frac{1}{1}$

2

7

5/ تأويل

$f(x) = x^3 + ax + b, y = 3x - a, (-b - \varepsilon)$

$1 - a + b = -\varepsilon \rightarrow 1 - 1 + b = -\varepsilon \rightarrow b = -\varepsilon$

$3 - a = -\varepsilon \rightarrow -a = -1 \rightarrow a = 1$

$f(x)$

$\Rightarrow x^3 - 2x - 1, y = 3x - 1$

$(x+1)(-x^2+x+1)$

-1

1/2

8

$x_1 x_2 = \frac{\sqrt{5} \mp 1}{2} \Rightarrow x_1 + x_2 = 0$

$\{(2, a+b), (1, 2a), (-1, a-b+1)\}$

$a+b = 2a$
 $b = a$

$\rightarrow 2a = a - 2b + 1 \xrightarrow{a=b} 2b = b - 2b + 1 \rightarrow 2b = 1$
 $b = \frac{1}{2}$

9

$\rightarrow a = b = \frac{1}{2}$ 2

$\frac{fx^2 - ax + c + 1}{bx + 2} = x \rightarrow fx^2 - ax + c + 1 = bx^2 + 2x$

$\rightarrow b = f$

$a = 0$

$c = 2$

$\rightarrow a + b + c = 4$

1/8

10

$b - 2, a + a + 2 \rightarrow 2a = f + 2 \rightarrow a = 1$

ب-۱

$$\int \frac{1}{x} - \frac{1}{y} = -1 \xrightarrow{x=\omega} \int \frac{-\omega}{x} + \frac{1}{y} = \omega$$

$$\left\{ \begin{array}{l} \frac{\omega}{x} - \frac{1}{y} = -3 \\ \frac{\omega}{x} + \frac{1}{y} = \omega \end{array} \right. \rightarrow \frac{1}{y} = 2 \rightarrow \boxed{y = -1}$$

$$i \neq y = -1 \rightarrow \frac{1}{x} + 1 = -1 \rightarrow \frac{1}{x} = -2 \rightarrow \boxed{x = -\frac{1}{2}} \rightarrow \frac{x}{y} = +\frac{1}{2}$$

$$f = \left\{ (-1, m^2 - 3m), (3, \omega), (-1, -2), (m+1, 4), (2, \varepsilon), (m^2 + 2, \varepsilon_{m+1}) \right\}$$

$(-1, m^2 - 3m), (-1, -2) \rightarrow m^2 - 3m + 2 = 0 \rightarrow m = 2$
 $\rightarrow m = 1$

$m = 1 \rightarrow (2, \varepsilon)(m+1, 4) \rightarrow (2, \varepsilon)(2, 4) \times$
 $m = 2 \rightarrow (3, \omega)(m+1, 4) \rightarrow (3, \omega)(3, 4) \times$

به ازای صغیر مقدار m جواب تفواصردانست!

$$(1, -2)(1, a+1) \rightarrow a+1 = -2 \rightarrow \boxed{a = -3}$$

$$f(-3) + 2f(2) = 3f(1) \rightarrow -4 + 2f(2) = -4 \rightarrow f(2) = 0 \rightarrow \boxed{b = 0}$$

$$x = \frac{y}{\sqrt{1-y^2}} \rightarrow \frac{y_1}{\sqrt{1-y_1^2}} = \frac{y_2}{\sqrt{1-y_2^2}} \rightarrow \frac{y_1^2}{1-y_1^2} = \frac{y_2^2}{1-y_2^2}$$

$$\rightarrow y_1^2 - y_1^2 y_2^2 = y_2^2 - y_1^2 y_2^2 \xrightarrow{\text{هم عبارت } y_1, y_2} y_1 = y_2 \rightarrow \checkmark \text{ رابعاً تابعیت}$$

$$y - 3x + a = 0 \xrightarrow{(-1, -2)} -2 + 3 + a = 0 \rightarrow \boxed{a = 1}$$

$$y = x^2 + ax + b \xrightarrow{(-1, -2)} -2 = 1 - 1 + b \rightarrow \boxed{b = -2}$$

$$3x - 1 = x^2 + x - 2 \rightarrow x^2 - 2x - 1 = 0 \xrightarrow{x = -1} (x+1)(x^2 - x - 1) = 0 \rightarrow \Delta > 0 \rightarrow S = -\frac{b}{a} = 1$$

ریشه عبارت

