

$$f(x) = \frac{2x^2 + fx + a}{x^2 + fx + v}$$

$$f(\sqrt{x}-x) = \frac{x+1}{x+x} = \frac{x}{2} = \frac{x^2}{2x}$$

$$f(x) = \frac{x^2 + ax + b}{x^2 + fx + v}$$

$$\begin{aligned} -b &= v \\ -1 - a + b &= -v \rightarrow b = v \\ -f + v + a &= 0 \\ a &= -1 \end{aligned}$$

$$y = vx + 1$$

$$f(x) = \frac{x^2 + x - 1}{x^2 + x - 1} \Rightarrow \frac{x^2 + x - 1}{x^2 + x - 1} = \frac{x^2 + x - 1}{x^2 + x - 1}$$

$$\begin{array}{r|l} x^2 - 2x - 1 & x+1 \\ -x^2 - 2x & \\ \hline 2x + 2x - 1 & \\ -x^2 + x & \\ \hline 2x - 1 & \\ -2x - 1 & \\ \hline -2 & \end{array}$$

$$\frac{x^2 - 5x + 4}{(x+1)(x^2 - x - 1)} \Rightarrow \frac{Sx + 1}{Dx - 1} = \frac{-b}{a}$$

$$\Delta = b^2 - 4ac$$

$$x = \frac{+1 \pm \sqrt{5}}{2}$$

$$\frac{1 + \sqrt{5}}{2} + \frac{1 - \sqrt{5}}{2} = \frac{2}{2} = 1$$

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

$$f(x) = \frac{x^2 + ax + b}{x^2 + fx + v}$$

$$a+b = 2a = a - 2b + 1$$

$$\begin{aligned} a+b &= a \\ b &= 1 \\ b &= \frac{1}{2} \end{aligned}$$

$$\begin{aligned} a+b &= 2a \\ b &= a \\ \frac{1}{2} &= a \end{aligned}$$

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(1.)

$$f(x) = \frac{bx^2 - ax + c}{bx^2}$$

$$f(x) = x$$

از این جا  
با  $x$  ضرب

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

$$bx^2 - ax + c = bx^2$$

بسی

$$\frac{bx^2 - ax + c}{x} = bx - a$$

بسی

$$bx - a = bx + c$$

$$\begin{aligned} b &= b \\ a &= -c \\ c &= -1 \end{aligned}$$

رہر فتر

یسنا قرافی تکلیف ۲۷

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(الف)  $(9, 2xy)$   $(2x - y, -4)$

$$\begin{cases} 2x - y = 9 \\ x + 2y = -4 \end{cases} \xrightarrow{\times 2} \begin{cases} 4x - 2y = 18 \\ x + 2y = -4 \end{cases}$$

$$\frac{3x}{3} = 14$$

$$x = 14$$

$$y = -3$$

$$\frac{x}{y} = \frac{14}{-3} = \left[ \frac{-14}{3} \right]$$

ب)  $(-1, -3)$   $(\frac{1}{x} - \frac{1}{y}, \frac{2}{x} - \frac{3}{y})$

$$\begin{cases} \frac{1}{x} - \frac{1}{y} = -1 \\ \frac{2}{x} - \frac{3}{y} = -2 \end{cases} \xrightarrow{\times -2} \begin{cases} -\frac{2}{x} + \frac{2}{y} = 2 \\ \frac{2}{x} - \frac{3}{y} = -2 \end{cases}$$

$$\frac{2}{y} = 4 \rightarrow y = \frac{1}{2} \rightarrow \frac{x}{\frac{1}{2}} = \frac{1}{\frac{1}{2}} = 2 \rightarrow x = 1$$

$$\begin{aligned} a &= -2 \\ a + 1 &= -2 \end{aligned}$$

f = { (a, a), (1, a+1), (1, -2), (2, b) }

$$f(a) + 2f(2) = 3f(1)$$

$$f(1) + 2f(2) = 3f(1)$$

$$-9 + 2b = -9 \rightarrow b = 0$$

تابع نید

$$2, 4 \times 4, 9$$

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

$$m^2 - 3m + 4 = 0$$

$$(m-2)(m-1) = 0$$

$$m = 2 \text{ or } m = 1 \Rightarrow x$$

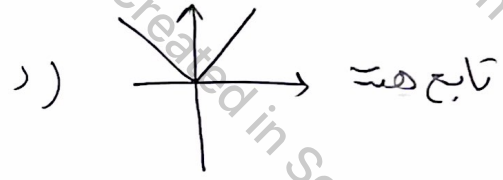
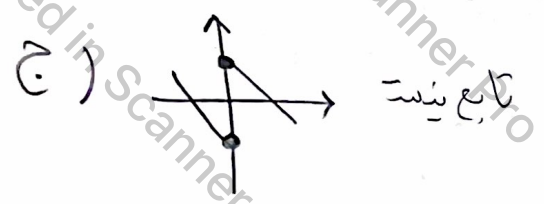
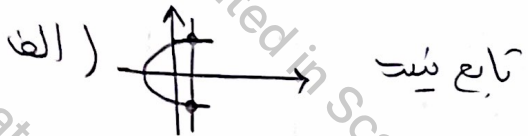
تابع نید

به ازای هیچ مقدار

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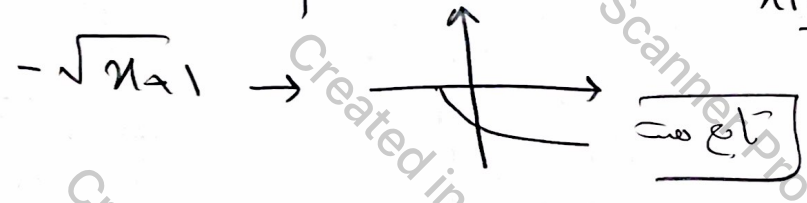
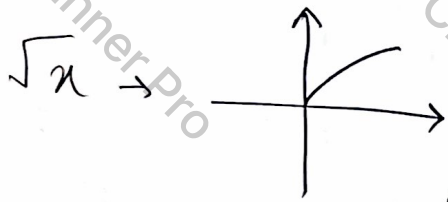
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الف)  $y = -\sqrt{x+1} \Rightarrow y_1 = -\sqrt{x_1+1} \xrightarrow{\text{توالی}} y_1^2 = 4|x_1+1|$   
 $y_2 = -\sqrt{x_2+1} \rightarrow y_2^2 = 4|x_2+1|$



$x_1 = x_2 \rightarrow y_2^2 = y_1^2 \rightarrow y_1 = \pm y_2$

ب)  $x = \frac{y}{\sqrt{1-y^2}} \xrightarrow{\text{توالی}} y^2 = 1-y^2 \rightarrow y_1^2 = 1-y_2^2$   
 $y_1 = \pm \frac{1}{y_2}$

تابع نبتہ ہستہ

لے ۲ ازاں  $\sqrt{2}$

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الف)  $|y_1| = x_1 \rightarrow \begin{cases} |y_1| = x_1 \\ |y_2| = x_2 \end{cases} \xrightarrow{x_1 = x_2} |y_1| = |y_2|$   
 $y_1 = \pm y_2$  تابع نبتہ

ب)  $y^3 + 3y^2 + 3y + x^3 + x = 0$

$x=0 \rightarrow y^3 + 3y^2 + 3y = 0$

$y(y^2 + 3y + 3) = 0$

منزل  $y^3 + 3y^2 + 3y = -x^3 - x - 3y^2$

$y=0$  تابع ہستہ

$y^3 + y \rightarrow$  تابع ہستہ