

[1, 4]

f(x) = 1 - a/x

f(1) = 1 - a

f(4) = 1 - a/4

f(4) - f(1) = (1 - a/4) - (1 - a) = (1 - a/4 - 1 + a) = (3a/4)



f'(x) = a/x^2

a/4 = a/x^2

x^2 = 4, x = 2, x = -2

در بازه داده شده نیست
پس قابل قبول

y = 2ax^2 - 5x + 11a -> y' = 4ax - 5

4ax - 5 = 0

4ax = 5

4ax = 4

4ax = 4

4ax = 4

x^2 = 1/4 -> a = 1/4

a = -1/4

a = -1/4

A: (n, x)

2ax^2 - 5x + 11a = x

2ax^2 - 6x + 11a = 0

2ax^2 - 6x + 11a = 0

-6x + 11a = 0

-6x = -11a -> x = 11a/6

1, 15

a = 1/4 -> تابع -> x^2 - 6x + 11 = (x - 4)^2 = 0 -> فقط یک ریشه هست

$$Y \alpha \alpha = Y$$

$$\alpha^T \alpha = 1 \Rightarrow 0.6$$

$$L_{0.1} = 0.6$$

$$-Y \alpha + 1 \alpha \alpha$$

$$-Y \alpha = 1 \alpha \alpha \Rightarrow \alpha = Y \alpha$$

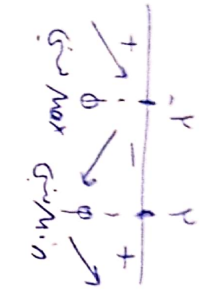
$$y = \alpha^T x - 1 \quad \Rightarrow \quad y' = Y \alpha \alpha^T - 1 \quad \Rightarrow$$

$$Y \alpha \alpha^T - 1 \Rightarrow$$

$$Y \alpha \alpha^T = 1 \Rightarrow$$

$$\alpha^T = \epsilon \Rightarrow \alpha = Y$$

$$\alpha = -Y$$



$$\rightarrow (Y, Y^T - 1 \times Y^T)$$

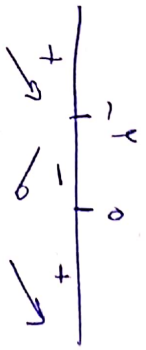
$$(Y, -1 \times)$$

(P)

$$y = \alpha^T x + \alpha^T x - Y \alpha \alpha - F \Rightarrow y' = Y \alpha \alpha^T + Y \alpha \alpha - Y b$$

$$y = \alpha^T x + Y \alpha \alpha - F$$

$$f(x) = \underbrace{(-Y)}_{-1} + \underbrace{Y}_{+} (x) - F = 0$$



$$\alpha = 0$$

$$-Y b = 0$$

$$b = 0$$

$$1 \times -F \alpha - Y b = 0$$

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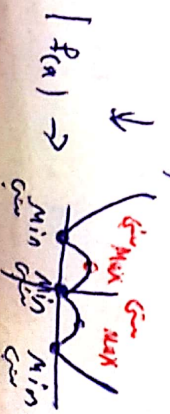
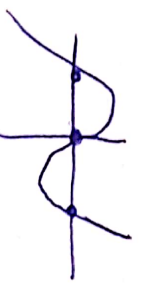
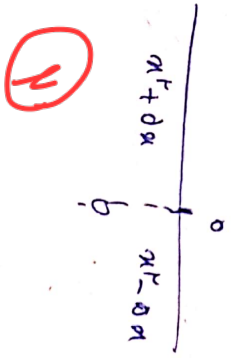
$$f(0) = -F$$

$$(-Y, 0) \quad (0, -F)$$

$$\rightarrow \alpha = \sqrt{(Y) \frac{1}{2} (x)} \quad F = \sqrt{F_0} = Y \sqrt{b}$$

$$\text{Max}_{\alpha} = Y$$

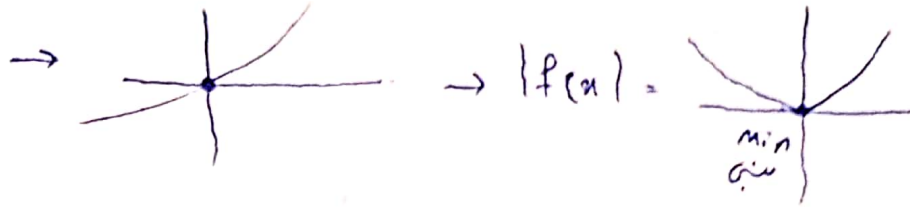
$$\rightarrow \frac{1}{M} = \frac{Y}{F} = 1 \times$$



$$f(x) = x(x+r)$$

- 6

$$\begin{array}{c|c} 0 & \\ \hline x(-x+r) & x(x+r) \\ -x^2+rx & x^2+rx \end{array}$$



~~$f(x) = x^2 + rx$~~ $\rightarrow f(x) = x(x+r)$

$x=0$ $x=-r$

$\frac{1}{r} \quad 1$

تجزیه و تحلیل

تقریبی } 0 \checkmark

$$f(x) = -x^2 + rx = x(-x+r)$$

$x=0$ $-x+r=0$
 $-x=-r$
 $x=r$

$x > 0 \rightarrow rx+r$
 $x = -r$
 $x = -1$

$x < 0 \rightarrow -rx+r$
 $-rx = -r$
 $x = 1$

نقطه

(r)

$$f(x) = \sqrt{x^r} |x-a|$$

- 7

$$\begin{array}{c|c} a & \\ \hline \sqrt{x^r}(a-x) & \sqrt{x^r}(x-a) \end{array}$$

$$f(x) = \sqrt{x^r}(a-x) = ax^{\frac{r}{2}} - x^{\frac{r+1}{2}} \Rightarrow f'(x) = \frac{r}{2}ax^{-\frac{r}{2}} - \frac{r+1}{2}x^{\frac{r-1}{2}} = 0$$

$$f\left(\frac{ra}{a}\right) = \sqrt{\frac{ra^r}{a}} \left(\frac{ra}{a}\right) = 1/a$$

$$\frac{ra^r}{a} \times \frac{ra}{a} = \frac{r^2 a^r}{a} \Rightarrow \frac{r^2 a^r}{a} = \frac{r^2 a^r}{a}$$

$$\frac{r}{2}a - \frac{r+1}{2}x = 0 \Rightarrow \frac{r}{2}a = \frac{r+1}{2}x \Rightarrow x = \frac{ra}{a}$$

$$\frac{r}{2}a - \frac{r+1}{2}x = 0 \Rightarrow ra - (r+1)x = 0$$

$ra = (r+1)x$
 $ra = ax$
 $a = ax$
 $x = \frac{ra}{a}$

f(x)

$$f\left(\frac{y_0}{a}\right) = \sqrt{\frac{f_0}{y_0}} \left(\frac{y_0}{a}\right) = \frac{1}{a} \sqrt{f_0 y_0}$$

$$\frac{f_0}{y_0} \times \frac{y_0}{a} = \frac{f_0}{a} \Rightarrow \frac{1}{y_0} \times \frac{y_0}{a} = \frac{1}{a}$$

$$\frac{1}{2} a - \frac{f_0}{a} = 0 \Rightarrow y_0 - a = 0$$

$$y_0 = a$$

$$a = \frac{y_0}{y}$$

$$\frac{\frac{1}{2} a - \frac{f_0}{a}}{\sqrt{a}} = \frac{0}{\sqrt{a}} = 0$$

$$\sqrt{a} = 0$$

$$\frac{1}{2} a - \frac{f_0}{a} = 0$$

$$f(x) = \sqrt{a(x) - x}$$

→

$$\frac{K(x+1)}{K-x} = ?$$

$$\frac{x+1}{x} = 1 \quad \checkmark$$

$$\frac{\sqrt{-x^2 - x}}{-1} = -\sqrt{-x^2 - x}$$

$$\frac{\sqrt{x^2 - x}}{0} = \sqrt{x(x-1)}$$



(1)

عقب عمل
عقب عمل

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$$m = 1$$

$$n = 1$$

$$K = 1$$

نقطه
در نقطه

حقیقی
مع

→ حقیقی در آن است
در آن است

0 و 1 و 1/2

حقیقی
در آن است

$$\alpha(x-1) = 0 \Rightarrow \alpha = 1$$

$$\alpha = 1$$

حقیقی
در آن است

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

$$f'(x) = \frac{-2x-1}{2\sqrt{-x^2-x}} \Rightarrow -2x-1 = 0 \Rightarrow x = -\frac{1}{2}$$

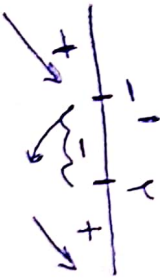
$$-2x-1 = 0 \Rightarrow x = -\frac{1}{2}$$

$$y = \frac{m^{n+1}r}{m-1+m} \Rightarrow y' = \frac{m(x-1+m) - m^{n+1}r}{(x-1+m)^2} = \frac{-m^{n+1}r}{(x-1+m)^2}$$

$$\rightarrow \cancel{m}^{r-1} m^{r-m-r} = \dots$$

$$(m-1)(m+1) = \dots$$

\swarrow $m-1$, \searrow $m+1$
 $m \neq x$ $m = -1$



$$-1 < m < r$$

$$\frac{d^2y}{dx^2} > 0 \text{ or } < 0$$

①

$M = -1$

$-1 < M < 1$

$$\frac{a^2 + b^2}{c^2} \rightarrow \left\{ \begin{array}{l} 1 \\ 2 \end{array} \right.$$

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

$$\frac{\frac{x}{1+x^2}}{0} \quad \frac{x}{1-x^2}$$

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

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

حسابگرهای نقیض از این نیستند
که در نقطه‌های با مشتق برابر
مشتق = 0 است
در طول محاسبه $k=0$ مشتق را
با محاسبه مشتق آن هم

$-x^2 + 1 = 0$
 $-x^2 = -1$
 $x^2 = 1$
 $x = \pm 1 \rightarrow k = -1$

در $x=1$ مشتق
در $x=-1$ مشتق

$x \neq 0$ داریم پس در $x=0$
مشتق را در $x=0$ با مشتق
در $x=0$ با مشتق
در $x=0$ با مشتق

(1)

~~1+x^2~~
~~1-x^2~~
~~1+x^2~~
~~1-x^2~~
~~1+x^2~~
~~1-x^2~~

اینجا (مشتق) را
در $x=0$