

۱۹,۷۵ آمین!

عالم در میان - روزنامه سه شنبه

الف)  $y = (x - r[\frac{x}{r}])^r \rightarrow y = (r(\frac{x}{r} - [\frac{x}{r}]))^r$

0,5x - 1x \leq 1 \quad (2)

$$K_f = [0.9 f] \quad \checkmark$$

$$0 < \frac{x}{2} - \left| \frac{x}{2} \right| < 1$$

$\therefore \log y = \sin x + r \rightarrow y = e^{\sin x + r} \quad -1 \leq \sin x \leq 1$

$$y = l_0^{1+\epsilon} = l_0^{\epsilon}$$

$$K_f = [1.5 \times 10^4]$$

$$y = \sqrt{\frac{x-8}{x-9}}$$

$$y = \frac{r^2 f}{r^2 - 9} - y r^2 - y = r^2 f$$

$$y^{r-1} - y^r = ay - f \rightarrow y^r(y-1) = ay - f \rightarrow y^r = \frac{ay-f}{y-1} \rightarrow x = \pm \sqrt{\frac{ay-f}{y-1}}$$

$$\frac{y-f}{y-l} \geq 0 \quad \begin{array}{c} f \\ | \\ + \quad - \quad + \end{array} \xrightarrow{\text{D.O.}} [0, \frac{f}{l}], (1, +\infty)$$

$$a = c$$

$$b = \frac{2}{3}$$

$$a+b+c = \frac{5}{2} + \frac{5}{2} = \frac{5}{1}$$

$$C = 1$$

الف)  $y = x + \frac{1}{x} + 2\sqrt{x + \frac{1}{x}}$

صحيحة مفر  
عنا ١٥  
 $\frac{a_1}{n} \geq 0 \rightarrow n \geq 0$   
مفاد جاكه مفر

رسالة رافعة  
نزيل ارباب الازلي  
صفر

$$x + \frac{1}{x} \geq 2$$

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

$x + \frac{1}{x} = 2$   
حل بقدر

6. بقدر استطاعتك حلل

$$\rightarrow y = (r - \sin x)(1 + \sin x) \rightarrow y = r + r \sin x - \sin x - \sin^2 x$$

$$y = -\sin r + r \sin x + r \xrightarrow{\sin x = 1} -1 + r + r = \textcircled{r}$$

$$\begin{aligned} \sin \alpha &= 1 \rightarrow -1 + r + r = \textcircled{f} \\ \sin \alpha &= -1 \rightarrow -1 - r + r = \textcircled{g} \\ \sin \alpha &= -\frac{b}{r} = -\frac{5}{5} = -1 \end{aligned}$$

$$K_f = \lceil \log f \rceil$$

$$f(x) = -\frac{1}{p}x + b$$

$$0 = 1, 2, 3, 4, 5, 6, 7, 8, 9$$

سوال ۲

$$x=1 \rightarrow -\frac{1}{p} + 1 = \frac{p-1}{p}$$

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

۱

$$x=9 \rightarrow -\frac{1}{p} \times 9 + 1 = -\frac{9}{p} + 1 = \frac{p-9}{p}$$

$$مجموع = \frac{(1 + 2 + \dots + 9) \times \frac{p-1}{p}}{9}$$

$$\left( \frac{1}{p} + \frac{2}{p} + \dots + \frac{9}{p} \right) \times 9 =$$

$$\frac{9 \times 10}{2} \times \frac{1}{p} = \frac{45}{p}$$

سوال ۳

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

$$f(0) = \sqrt{c} \rightarrow \text{نقطه بر محور y}$$

$$a \leq 0 \rightarrow \text{نقطه در ربع دوم}$$

$$2b + c = 0$$

$$2b + c = 1$$

$$\rightarrow b = 1$$

$$2 + c = 1 \rightarrow c = -1$$

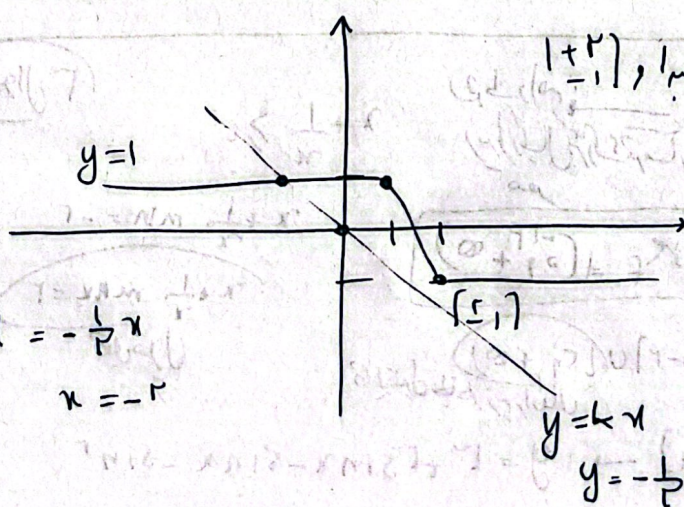
$$g(x) = \sqrt{x^2 + 0(x) - 2x - 1} \rightarrow y = \sqrt{x^2 - 2x - 1}$$

$$\min x^2 - 2x - 1 \rightarrow \min y = \sqrt{4 - 2} = \sqrt{2}$$

$$(K_f = \sqrt{2} + 0)$$

$$|x-2| - |x-1| = kx$$

سوال ۴



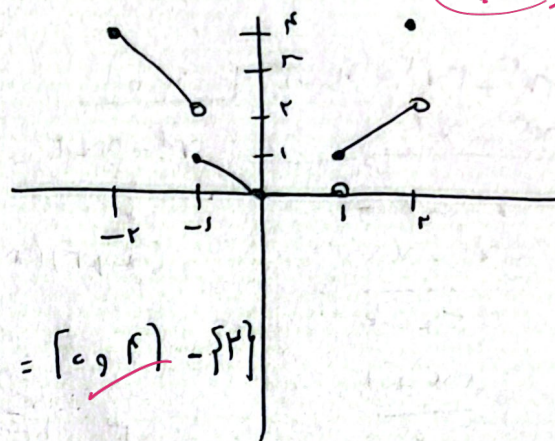
تقاطع در ربع اول و دوم را خط از مبدأ را در نظر بگیرید

$$y = kx \xrightarrow{x=-1, y=-1} 2k = -1$$

$$k = -\frac{1}{2}$$

الف)  $y = x|x|$

$-2 \leq x < -1 \rightarrow |x| = -x \rightarrow -2x$   
 $-1 \leq x < 0 \rightarrow |x| = -1 \rightarrow -x$   
 $0 \leq x < 1 \rightarrow |x| = x \rightarrow x$   
 $1 \leq x < 2 \rightarrow |x| = 1 \rightarrow x$   
 $x = 2 \rightarrow |x| = 2 \rightarrow 2x$

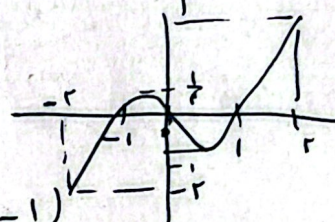


$K_f = [-2, 2]$

$2 \leq x \leq 2$

ب)  $y = x|x| - x$

$0 \leq x \leq 1 \rightarrow y = x^2 - x \rightarrow y = x(x-1)$



$-1 \leq x < 0 \rightarrow y = -x^2 - x \rightarrow y = -x(x+1)$

$-\frac{b}{2a} = -\frac{1}{-2} = \frac{1}{2} \rightarrow y_{max} = \frac{1}{4}$

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

$\frac{x^2+x}{x^2+x} \rightarrow y = \frac{x^2+x}{x(x+1)} \rightarrow \frac{x(x+1)}{x(x+1)} = 1 \rightarrow y = 1$

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

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

$y = \frac{x-1}{x-1} \rightarrow y(x-1) = x-1 \rightarrow y(x-1) = x-1$

$x = \frac{y-1}{y-1} \rightarrow K_f = (-\infty, 1) \cup (1, +\infty)$

وال ١.٠

$$y = \frac{x^5 + 2x^2 - x - 5}{x^2 - 1} \rightarrow \text{بجای ٥ بنویس ٥+}$$

$$\begin{array}{r} x^5 + 2x^2 - x - 5 \\ \underline{-x^5 - x^3} \phantom{-x - 5} \\ -x^3 + 2x^2 - x - 5 \end{array}$$

$$\underline{-x^3 - x - 5}$$

$$-x^3 - x$$

$$\underline{-x^3 - x}$$

$$2x + 5$$

٥

$$x^2 + x - 2$$

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

$$x+1 = 4$$

$$y = (x+1)(x+2)(x-1)$$

$$x \neq 1, -2$$

$$y = x+2$$

$$-1+2 = +1$$

$$1+2 = +3$$

