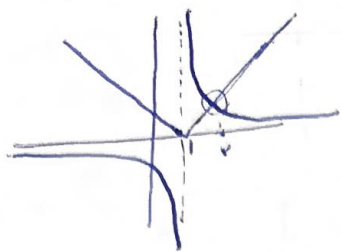


یازدهم دوره سر B

پرهام مقنونی



1- معادله $\frac{1}{x-1} = |x-1|$ چند جواب دارد؟
 اریست

2- $\left| \frac{x-1}{x} \right| < 2$ $\left(\frac{1}{x} + \infty \right)$

$\frac{1-x}{-x} < 2$	$\frac{1-x}{x} < 2$	$\frac{x-1}{x} < 2$
$1-x < -2x$	$1-x < 2x$	$x-1 < 2x$
$1 < -x$	$1 < 3x$	$-1 < x$
$x < -1$	$\frac{1}{3} < x$	

مجموعه جوابی

$\left| \frac{x-2}{x+1} \right| > 1$

$\frac{x-2}{-x-1} > 1$	$\frac{x-2}{x+1} > 1$	$\left \frac{x-2}{x+1} \right > 1$
$x-2 < -x-1$	$x-2 > x+1$	$x-2 > x+1$
$x < -3$	$-2 > 1$	$-2 > x$
	$\frac{1}{3} > x$	

$(-3, \frac{1}{3})$

$x < |x+y|$

$x < -x-y$	$x < x+y$
$x+y < 0$	$x-x-y < 0$
$x < -y$	$-y < y$

$(-y, y)$

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

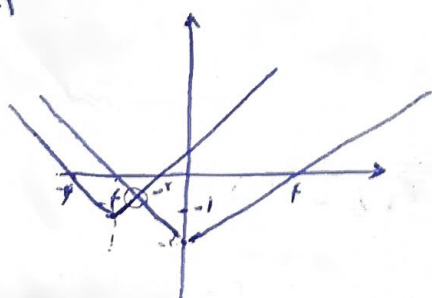
$\alpha = \frac{1}{x}$

$y = |x+1| - |x| + |x-2|$

$R_f = [-1, 2]$
 $-1 + 2 = 1$

$-x-1+x+x-2$	$x+1+x+x-2$	$ x+1-x+x-2 $	$ x+1-x+x-2 $
-1	$x+3$	$-2x+3$	-1

$y = \left| \frac{1}{x} x + 2 \right| - 1$



$y = \left| \frac{1}{x} x + 2 \right| - 1$

$-\frac{1}{x} x - 2 = \frac{1}{x} x + 2 - 1$
 $-3 = x$

$$f(a) = [|1-x| - |x+f|]$$

$$1-x+x+f \quad \begin{array}{c|c} -f & 1 \\ \hline 1-x+x+f & 1-x-x-f \\ 1-x & -1 \\ -x-x-f & -1 \end{array}$$

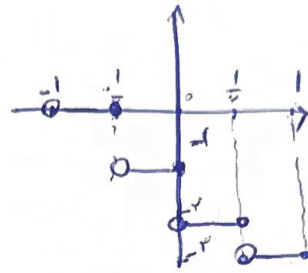
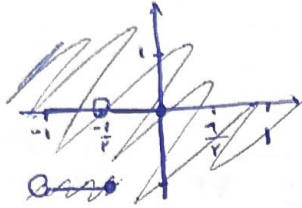
$$R_f = [-1 \quad a] \xrightarrow{[]} R_f = \{-a, -f, \dots, f, a\}$$

$$f(a) = \frac{1}{a} - \left[\frac{x+1}{a} \right] \quad -1 + \frac{1}{a} - \left[\frac{1}{a} \right] \rightarrow R_f = [-1, 0]$$

$0 < y < 1$

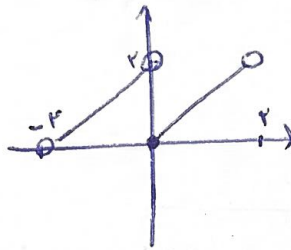
$$y = [-x] - 1$$

- 0 $-1 < x < -\frac{1}{2}$
- 1 $-\frac{1}{2} < x < 0$
- 2 $0 < x < \frac{1}{2}$
- 3 $\frac{1}{2} < x < 1$



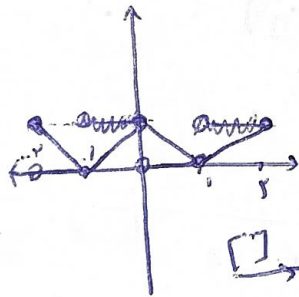
$$y = x - 2 \left(\frac{x}{2} \right)$$

- $x+2$ $-2 < x < 0$
- x $0 < x < 2$

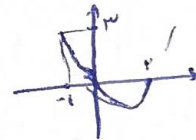
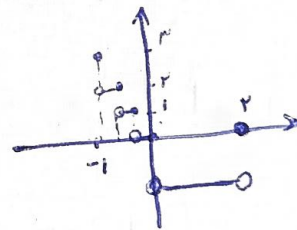
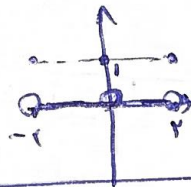


$$[|x| - 1]$$

- 1 $x=1$
- 0 $-1 < x < 1$
- 1 $-2 < x < -1$
- 0 $-3 < x < -2$
- 1 $-4 < x < -3$



$$[x^2 - 1/2]$$



$$a + [b] = f, r$$

$$b - [a] = r, f$$

$$[a] + [b] = f \quad (b) - [a] = r$$

$a = f \quad b = r$

$$a = 1, r$$

$$b = r, f$$

$$r, f + 1, r = f, r$$

$$(1+\sqrt{r})^4 + (1-\sqrt{r})^4 = 19\Lambda$$

$$(1+\sqrt{r})^4 + (1-\sqrt{r})^4 = 19\Lambda$$

$$t = 19V, \rightarrow [] = 19V$$

$$t = -0.756$$

$$t + \frac{1}{t} = 19\Lambda$$

$$t^2 - 19\Lambda t + 1 = 0$$

$$t = 9\Lambda$$

$$t = -9\Lambda$$

$$(1+\sqrt{r})^4 = 9\Lambda$$

$$(1+\sqrt{r})^4 = 9\Lambda$$