

$$\frac{1}{x-1} = |x-1|$$

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

1

$$x^2 - 2x + 1 = 1$$

$$x^2 - 2x = 0 \Rightarrow x(x-2) = 0$$

$$x > 1$$

$$x = 0 \Rightarrow \text{غلط}$$

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

$$\Delta = -4 \Rightarrow \text{ریشه حقیقی ندارد}$$

ایست

الف) $\left| \frac{2x-1}{x} \right| < 2 \Rightarrow |2x-1| < |2x|$

2

$$2x^2 - 2x + 1 < 2x^2 \Rightarrow \frac{1}{2} < x$$

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

$$x^2 - 2x + 4 > 4x^2 + 4x + 1$$

$$3x^2 + 6x - 3 < 0$$

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

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

$$x^2 - x - 4 < 0$$

$$\frac{-1}{1} < x < \frac{5}{1}$$

3

$$(x-3)(x-2) < 0 \Rightarrow -2 < x < 3 \quad \textcircled{1}$$

$$x > -4$$

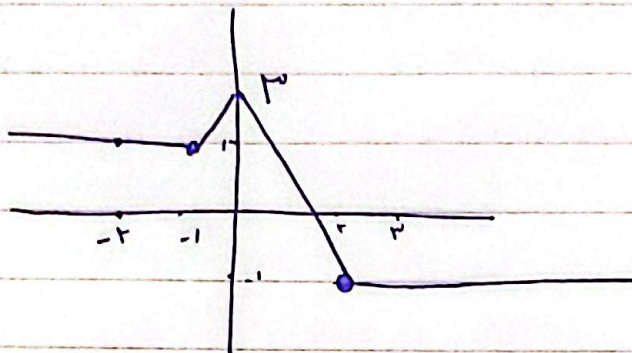
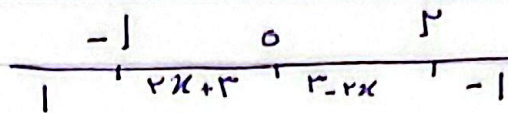
$$x^2 + x + 4 < 0 \Rightarrow x < -4$$

$\Delta < 0$
حلقه مثبت
 $\emptyset$

$$\textcircled{1} \cup \textcircled{2} \Rightarrow \left| x - \frac{3+2}{2} \right| < \frac{3-2}{2}$$

$$\left| x - \frac{5}{2} \right| < \frac{1}{2} \Rightarrow \alpha = \frac{1}{2}$$

y:



$$\left. \begin{array}{l} y_{\max} = 2 \\ y_{\min} = 1 \end{array} \right\} \Rightarrow 2 - 1 = 1$$

$$y = \left| \frac{1}{2}x \right| - 2 \Rightarrow \left| \frac{1}{2}(x+\varepsilon) \right| - 2 \Rightarrow$$

$$\left| \frac{1}{2}(x+\varepsilon) \right| - 2 + 1 = \left| \frac{1}{2}(x+\varepsilon) \right| - 1$$

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

$$|x| - 4 = |x + 4| - 2$$

$$|x| = |x + 4| + 2$$

$$x = x + 4 \Rightarrow \emptyset$$

$$-x = x + 4$$

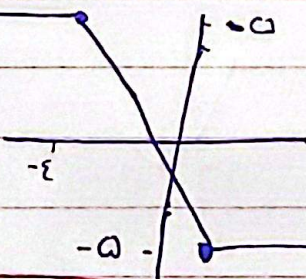
$$\boxed{x = -3}$$

$$-x = -x - 4 \Rightarrow \emptyset$$

$$\boxed{x = -3}$$

الف) $f(x) =$

تابع زوجی



$$R = [-a, a] \Rightarrow$$

$$R = \{-a, -\varepsilon, \dots, \varepsilon, a\}$$

ب) $\frac{1}{x} - \left[\frac{x+1}{x} \right] = 1 + \frac{1}{x} - \left[\frac{1}{x} \right] \Rightarrow$

$$\boxed{R = [1, 2]}$$

✓

$$1.5 - 4\pi < 2$$

$$[-rx] \cdot 1 = 0$$

二)

$$0.5 - 1.21 < 1$$

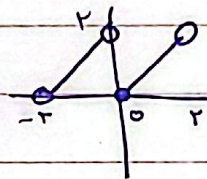
$$\Rightarrow \quad " \quad " \quad = -1$$

-15.1250

" " = - r

$$-r < -r_2 < -1$$

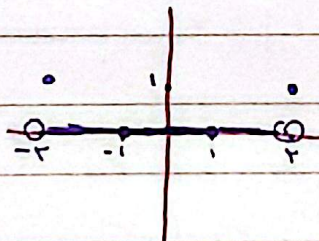
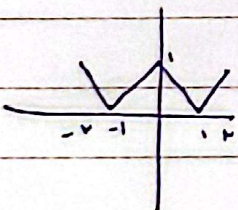
11 11 = - 3



$$-r < x < 0 \Rightarrow x+r$$

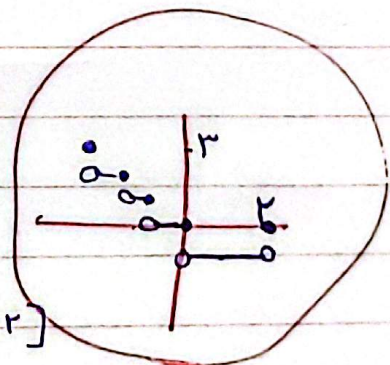
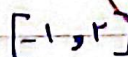
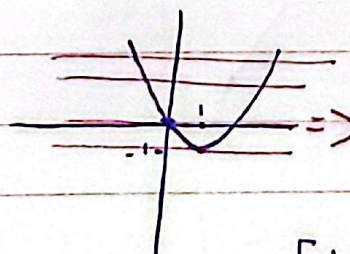
$$\sigma, \tau, \chi \in \tau \Rightarrow \chi$$

$$[-r, r]$$



→ $[x^r + x]$

$$x^r + x =$$



$$a + [b] = \{, 2$$

$$b - [a] = 2, \{$$

1

$$a + b + [b] - [a] = 4, 4 \quad b \text{ جزای } a = 2, \{$$

$$a + [b] = \{, 2 \Rightarrow \text{جزای } a = 2, \{$$

$$a + b + b - 2, \{ - a + 2, \{ = 4, 4$$

$$a + b - 2, \{ = \{, 2$$

$$a + b = \{, 4$$

$$(1 + \sqrt{2})^4 + (1 - \sqrt{2})^4 = (1 + \sqrt{2})^4 + (1 + \sqrt{2})^{-4} = 191$$

$$(1 + \sqrt{2})^4 = t$$

$$t + \frac{1}{t} = 191$$

$$t^2 + -191t + 1 = 0$$

$$[t^2 + -191t + 1] = 0$$

$$[191, \dots] \Rightarrow [0, 0, \dots]$$

$$[t] = -191$$

$$[(1 + \sqrt{2})^4] = 191$$