

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

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

$$x^2 - 2x = 0$$

$$x(x-2) = 0 \rightarrow x=2$$

$$\rightarrow x=0$$

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

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

$$x^2 - 2x + 2 = 0$$

ریشه ندارد

$$\text{الف: } -2 < \frac{2x-1}{x} < 2$$

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

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

$$\left(\frac{1}{x}, +\infty\right)$$

$$\frac{0}{+} - \frac{1}{+} = \frac{-}{+}$$

$$\frac{+}{+} - \frac{0}{-} = \frac{+}{-}$$

$$\therefore \frac{x-2}{2x+1} > 1$$

$$\frac{x-2-2x-1}{2x+1} > 0$$

$$\frac{-x-3}{2x+1} > 0$$

$$\frac{-}{+} - \frac{+}{+} = \frac{-}{+}$$

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

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

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

$$\frac{-}{+} - \frac{+}{-} = \frac{+}{+}$$

صحت ندارد

$$-x-4 < x^2 < x+4$$

$$0 < x^2 + x + 4 \quad X$$

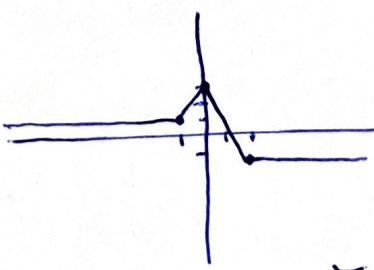
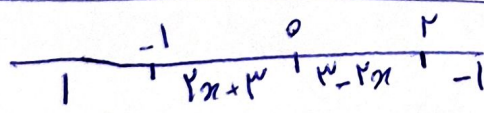
$$x^2 - x - 4 < 0$$

$$(x-3)(x+2) < 0$$

$$\frac{-}{+} - \frac{+}{-} = \frac{+}{+}$$

$$|x - 0.5\omega| < 2.5\omega$$

$$\alpha = 0.5\omega$$



$$x = 2$$

$$x = -1$$

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

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

$$\frac{1}{x} x + 2 = \frac{1}{x} x - 1 \quad X$$

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

$$x = -\omega$$

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

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

الف:

$$\omega \frac{-\frac{1}{\omega} - \frac{1}{\omega} - \frac{1}{\omega}}{\omega} = \omega$$

$$R = [-\omega, \omega]$$

$$\therefore \frac{1}{x} - \left[\frac{1}{x} \right] + 1 = f(x)$$

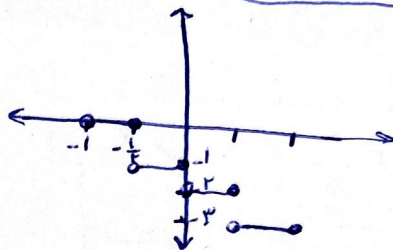
$$\text{الف: } [0, 1) + 1 \Rightarrow [1, 2)$$

$$\text{الف: } -1, -\frac{1}{r} = 0$$

$$0, \frac{1}{r} = -2$$

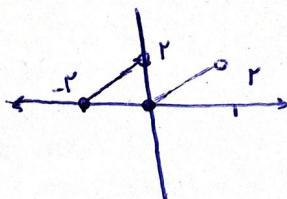
$$-\frac{1}{r}, 0 = -1$$

$$\frac{1}{r}, 1 = -3$$

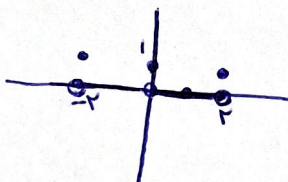
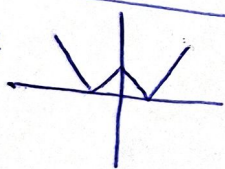


$$\therefore -2, 0 = x + 2$$

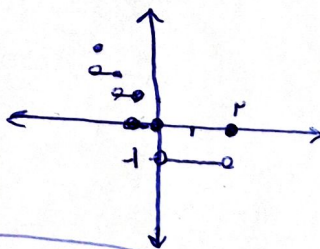
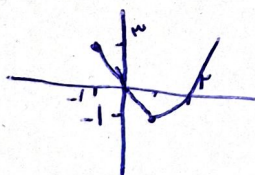
$$0, 2 = x$$



الف:



الف:



$$a = 0, 2 \rightarrow b = 1, 2$$

$$1, 2 - 0 \neq 1, 2 \quad \times$$

$$a = 1, 2 \rightarrow b = 1, 2$$

$$1, 2 - 1 = 1, 2 \quad \checkmark$$

$$1, 2 = 1, 2$$

$$\boxed{b = 1, 2}$$

$$\boxed{a = 1, 2}$$

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

$$t \times \frac{1}{t} = -1$$

$$t^2 + \left(\frac{-1}{t} \right)^2 = 19\Lambda$$

$$t^2 + \frac{1}{t^2} = 19\Lambda$$

$$t^2 = P$$

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

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

$$P = 99 \pm \sqrt{99^2 - 4}$$

$$t^2 = (1 + \sqrt{2})^2 = 99 + \sqrt{99^2 - 4}$$

$$\sqrt{99^2 - 4} = 9\Lambda$$

$$99 + 9\Lambda = \boxed{19V}$$