

نام و نام خانوادگی زهرا یزدانیا پاسخنامه تشریحی تکلیف شماره کلاس یازدهم ریاضی

$$\frac{1}{x-1} = |x-1| \rightarrow \frac{1}{x-1} = x-1 \rightarrow 1 = x^2 - 2x + 1 \rightarrow x^2 - 2x = 0 \rightarrow \boxed{x=2}$$

محقق ۰

$$\frac{1}{x-1} = 1-x \rightarrow 1 = -x^2 + 2x - 1 \rightarrow x^2 - 2x + 2 = 0 \rightarrow \Delta = 4 - 8 = -4 < 0$$

محقق ۰

الف) $\left| \frac{x-1}{x} \right| < 2 \rightarrow |x-1| - |2x| < 0 \rightarrow \frac{0}{1} \quad \frac{1}{1-2x} \quad \frac{1}{-1} \rightarrow \boxed{\left[\frac{1}{2}, +\infty \right)}$

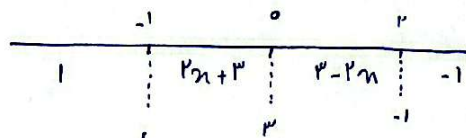
ب) $\left| \frac{x-2}{x+1} \right| > 0 \rightarrow |x-2| - |x+1| > 0 \rightarrow \frac{-\frac{1}{2}}{x+3} \quad \frac{2}{1-2x} \quad \frac{2}{-x-3} \rightarrow \boxed{\left[-\frac{1}{2}, \frac{1}{3} \right] - \left\{ \frac{1}{2} \right\}}$

$$x^2 - |x+6| < 0 \rightarrow \frac{-6}{x^2+x+6} \quad \frac{-6}{x^2-x-6} = (x-3)(x+2)$$

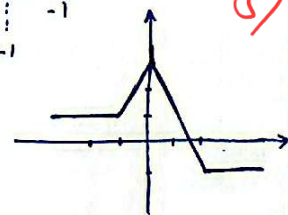
+ - +

$$|x-a| < \beta \rightarrow a = \frac{3+(-2)}{2} = \boxed{\frac{1}{2}}$$

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



$$3-1 = \boxed{2}$$



$$\Delta y = \left| \frac{1}{x} \right| - 2 \rightarrow y = \left| \frac{x+1}{x} \right| - 1 \rightarrow \left| \frac{x+1}{x} \right| - 1 - \left| \frac{x}{x} \right| + 2 = 0$$

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

-1 = 0 1 = 0 1 = 0

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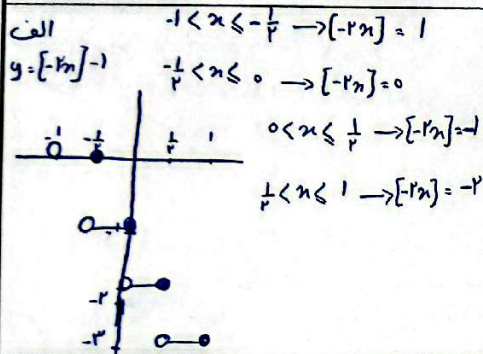
$x+1=0 \rightarrow \boxed{x=-1}$

الف ، $f(x) = [1-x] + [x+f] \rightarrow \frac{-f}{a} \frac{1}{-2x-3} \frac{1}{-a} \rightarrow R_f = \{0, \pm 1, \pm 2, \pm 3, \pm 6, \pm 9\}$

ب ، $\frac{1}{x} - \left[\frac{x+1}{x} \right] = \frac{1}{x} - 1 - \left[\frac{1}{x} \right] = \underbrace{1 - [1]}_{[0,1)} - 1 \rightarrow [-1, 0)$

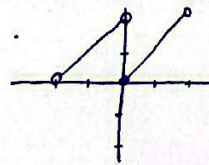
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ب ، $y = x - 2 \left[\frac{x}{2} \right]$

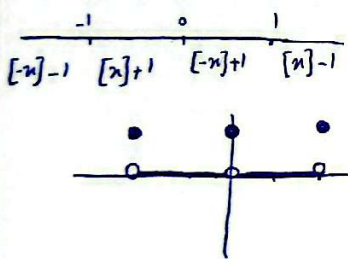
$-2 < x < 0 \rightarrow \left[\frac{x}{2} \right] = -1 \rightarrow x + 2$
 $0 \leq x < 2 \rightarrow \left[\frac{x}{2} \right] = 0 \rightarrow x$



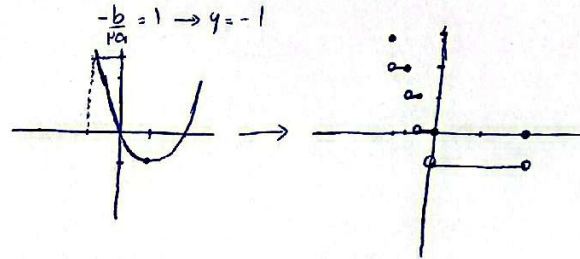
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الف ، $y = [1/2|x|]$ ، $x \in [-2, 2]$



ب ، $[x^2 - 2x] \rightarrow x \in [-1, 2]$



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$a + [b] = f, r \rightarrow 0, r \rightarrow a$ جزء غير صحيح

$b - [a] = r, f \rightarrow 0, f \rightarrow b$ جزء غير صحيح

$a + b = a + [b] + \underbrace{b - [b]}_{0, f} = f, r + 0, f = \boxed{f, r}$

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$(1 + \sqrt{2})^4 + (1 - \sqrt{2})^4 = 198$

$1 - \sqrt{2} \approx -0,4 \rightarrow \cancel{0,4} < 0,4^4 < 1 \rightarrow [198 - (0,4^4)] = \boxed{194}$

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