

$$\frac{1}{x-1} = x-1 \rightarrow (x-1)^r = 1 \rightarrow x^r + 1 - rx = 1$$

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

$$x^r - rx = 0$$

$$x(x-1) = 0$$

$$x = \frac{1}{2}r$$

$$(x-1)/(x-1) = 1 \begin{cases} x > 1 \rightarrow x = r \\ x < 1 \rightarrow x \end{cases} (x-1)^r = -1 \rightarrow \begin{cases} x^r + 1 - rx = -1 \\ x^r + r - rx = 0 \end{cases}$$

$$x > 0 \rightarrow -rx < rx - 1 < rx$$

$$x > \frac{1}{r}$$

$$x > \frac{1}{r} \cup x < \frac{1}{r} \Rightarrow$$

$$R - \left\{ \frac{1}{r} \right\}$$

$$x < 0 \rightarrow +rx > rx - 1 > -rx$$

$$-1 > -2x$$

$$x < \frac{1}{r}$$

$$+r$$

$$\left| \frac{x-r}{rx+1} \right| > 1 \rightarrow \frac{x-r}{rx+1} < -1 \rightarrow \begin{cases} x-r < -rx-1 \\ rx < +1 \end{cases} x < \frac{1}{r}$$

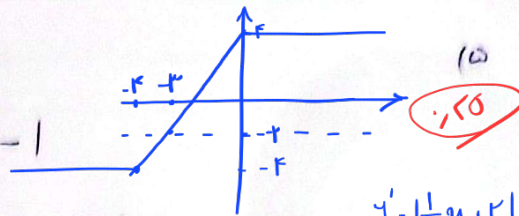
$$\frac{x-r}{rx+1} > 1 \rightarrow x-r > rx+1$$

$$-x > r$$

$$x < \frac{1}{r} \vee x < -r$$

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

$$y' = \left| \frac{1}{r} (x+1) \right| - 1$$

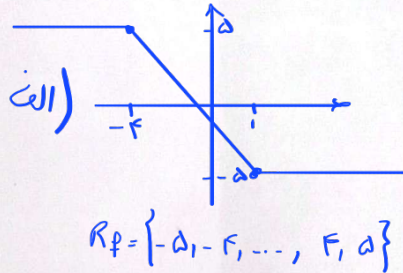
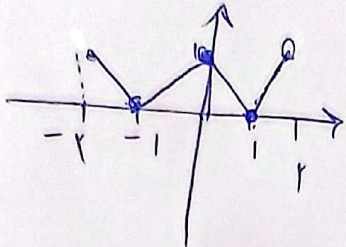


$$\left| \frac{1}{r} x \right| - 1 = \left| \frac{1}{r} (x+1) \right| - 1 \quad x = -r$$

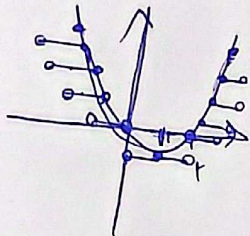
$$-x + \frac{1}{r} x + 1 = \frac{1}{r} (x+1) \rightarrow \boxed{x = \frac{1}{r}}$$

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

$$|x+r| - |x| = -r$$



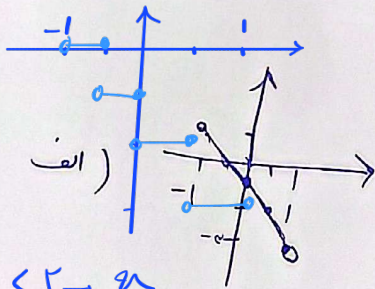
$$R_f = \{-a, -r, \dots, r, a\}$$



$$b) f(x) = \frac{1}{u} - \left[\frac{1}{u} \right] - 1 \rightarrow R_f = [-1, 1]$$

$$0 \leq \frac{1}{u} < 1$$

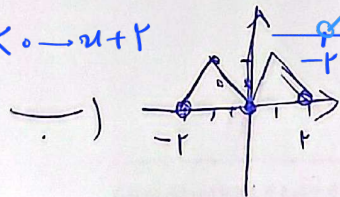
$$\begin{aligned} 0 < x \leq \frac{1}{r} &\rightarrow -r \\ \frac{1}{r} < x < 1 &\rightarrow -r \\ \frac{1}{r} < x \leq 0 &\rightarrow -1 \\ -1 < x \leq \frac{1}{r} &\end{aligned}$$



$$x=1 \rightarrow y=0$$

$$x=1 \rightarrow y=-1$$

$$\begin{aligned} 0 < x < r &\rightarrow x \\ -r < x < 0 &\rightarrow x+r \end{aligned}$$



$$x=r \rightarrow y=0$$

$$x=r \rightarrow y=r$$

مقدار اعشاری

$$a = 1, 2$$

$$[a] = 1$$

$$a + [b] = 1, 2 \quad \left\{ \begin{aligned} [a] + [b] &= 1 \\ [b] - [a] &= 1 \end{aligned} \right. \quad 19$$

$$b - [a] = 1, 2 \quad \left\{ \begin{aligned} [b] - [a] &= 1 \\ [b] - [a] &= 2 \end{aligned} \right.$$

مقدار اعشاری

$$2[b] = 1$$

$$[b] = 1$$

$$a+b = 1, 2 + 1, 2 = 1, 4 \quad b = 1, 2$$

اصفهان، خیابان جی، خیابان پروین،
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۰۳۱۳۵۸۱۷۱۶۵

medicalsamen

$$-r < \frac{r_{n-1}}{n} < r \Rightarrow \left\{ \begin{array}{l} \frac{1}{n} > -r \rightarrow n > \frac{1}{r} \\ \frac{1}{n} < 0 \rightarrow n < 0 \end{array} \right. \rightarrow n > \frac{1}{r}$$

(الـ ٢)

$$|n-r|^r > |n+1|^r \rightarrow r_{n+1} + 1n - r < 0 \rightarrow -r < n < \frac{1}{r}, n \neq \frac{1}{r} \quad (٢)$$