

نام و نام خانوادگی پاسنامه تشریحی تکلیف شماره ۲... کلاس نام و نام خانوادگی
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$$\frac{1}{n-1} = |n-1| \quad \begin{cases} n > 1 \\ n < 1 \end{cases}$$

$$\begin{aligned} 1 = n^2 - 2n + 1 &\rightarrow n^2 - 2n = 0 \quad \begin{cases} n = 0 \\ n = 2 \end{cases} \\ 1 = -n^2 + 2n - 1 &\rightarrow n^2 - 2n + 2 = 0 \quad \Delta < 0 \end{aligned}$$

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$$\Rightarrow \left| \frac{n-1}{n} \right| < 2 \quad \begin{matrix} n^2 \\ \infty \end{matrix} \quad \frac{n^2 - 2n + 1}{n^2} < 4 \rightarrow \frac{n-1}{n} > \frac{1}{2} \quad R = \left(\frac{1}{2}, +\infty \right)$$

$$\Rightarrow \left| \frac{n-2}{n+1} \right| > 1 \quad \begin{matrix} n^2 \\ \infty \end{matrix} \quad \frac{n^2 - 2n + 4}{n^2 + 2n + 1} > 1 \rightarrow \frac{-n^2 - 2n + 3}{n^2 + 2n + 1} > 0 \rightarrow \frac{-(n-1)(n+3)}{(n+1)^2} > 0$$

$$\begin{matrix} -3 & 1 \\ -1 & + \end{matrix} \quad n \neq -\frac{1}{2} \quad D = \left(-3, -\frac{1}{2} \right) \cup \left(-\frac{1}{2}, \frac{1}{2} \right)$$

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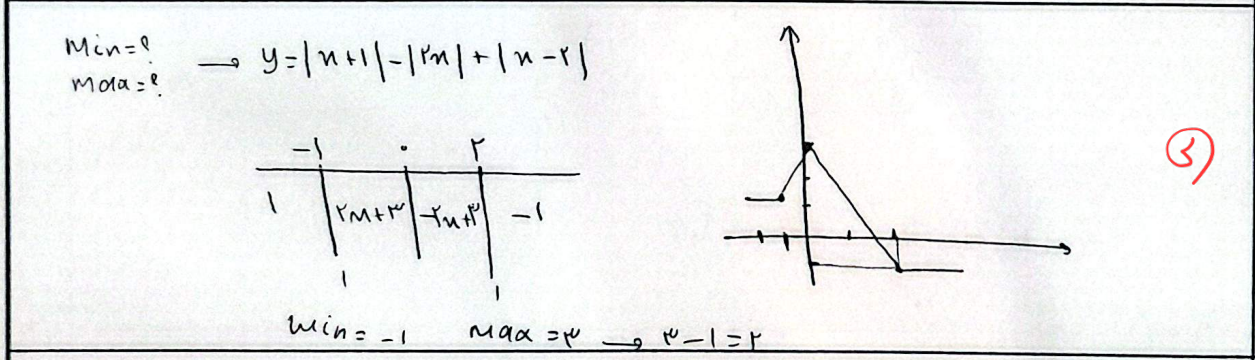
$$n^2 < |n+4| \quad \begin{matrix} n^2 \\ \infty \end{matrix} \quad n^2 - n - 4 < 0 \rightarrow (n-3)(n+2) < 0 \quad \begin{matrix} -2 & 3 \\ + & - \end{matrix}$$

$$|n-2| < 3 \quad \begin{matrix} n^2 \\ \infty \end{matrix} \quad n^2 + n + 4 > 0 \quad \Delta < 0$$

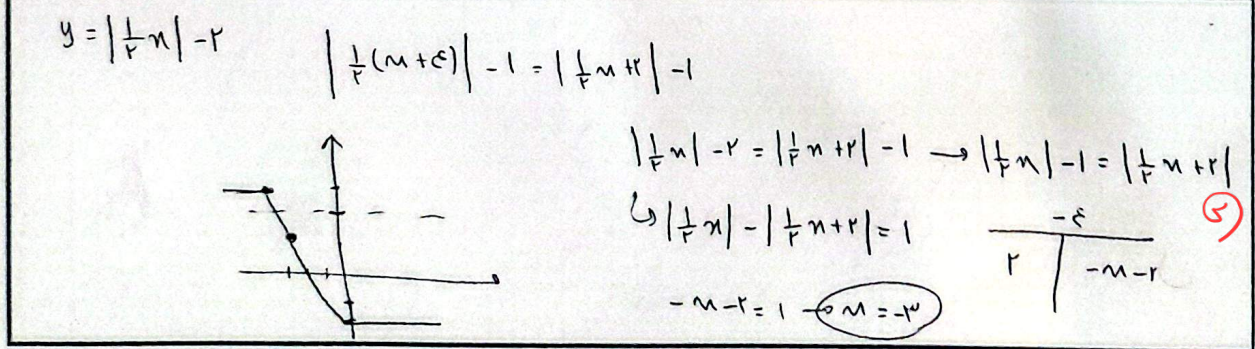
$$\alpha = 0 \quad \begin{matrix} -2 & 3 \\ - & + \end{matrix} \quad -2 - \frac{1}{2} < n - \frac{1}{2} < 3 - \frac{1}{2}$$

$$\left| n - \frac{1}{2} \right| < \frac{5}{2} \quad \alpha = -\frac{1}{2}$$

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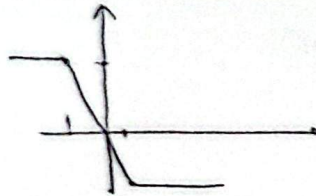


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$$f(n) = [|1-n| - |n+1|]$$



$$R_f = \{ \dots, \pm 1, \pm 2, \pm 3, \pm 4, \dots, \pm \infty \}$$

$$f(n) = \frac{1}{n} - \left\lfloor \frac{n+1}{n} \right\rfloor$$

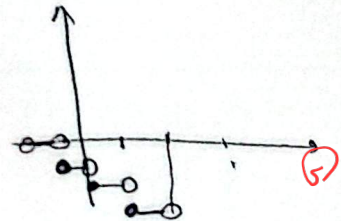
$$\frac{1}{n} - \left\lfloor \frac{1}{n} \right\rfloor - 1 \rightarrow R_f = (-1, 0)$$

$$0 \leq \frac{1}{n} - \left\lfloor \frac{1}{n} \right\rfloor < 1$$

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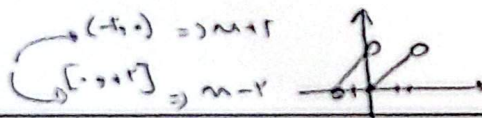
$$\rightarrow y = [-2n] - 1$$

$$n \in (-1, 1) \rightarrow \begin{cases} (-1, 0) \rightarrow -1 - 1 = -2 \\ [-1, 0) \rightarrow -1 - 1 = -2 \\ [0, 1) \rightarrow -1 - 1 = -2 \\ [1, 1) \rightarrow -1 - 1 = -2 \end{cases}$$



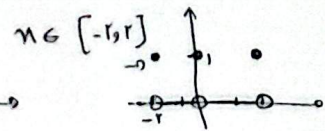
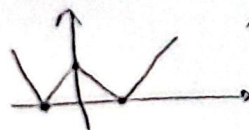
$$\rightarrow y = n - r \left\lfloor \frac{n}{r} \right\rfloor$$

$$n \in (-r, r)$$



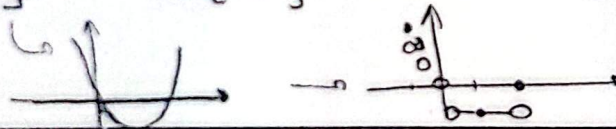
$$\rightarrow y = [|1-n| - 1]$$

$$n \in [-1, 1]$$



$$\rightarrow y = [n^r - rn]$$

$$n \in [-1, 1]$$



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

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

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

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

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

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

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

$$a + b = r$$

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

$$r[b] = r$$

$$[b] = r \quad [a] = 1$$

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$$(1 + \sqrt{2})^4 + (1 - \sqrt{2})^4 = 19$$

$$(1 + \sqrt{2})^4 = 19 - (1 - \sqrt{2})^4$$

$$[(1 + \sqrt{2})^4] = 9$$

$$1 < 1 - \sqrt{2} < 0 \rightarrow 0 < (1 - \sqrt{2})^4 < 1$$

$$(1 + \sqrt{2})^4 = 19 - (1 - \sqrt{2})^4 = 19 - 1 = 18$$

$$[(1 + \sqrt{2})^4] = 19$$

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