

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۲ کلاس
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$\frac{1}{n-1} = |n-1| \quad \left\{ \begin{array}{l} n > 1 \\ n < 1 \end{array} \right.$

$n < 0$ $n < 1$
 $\overline{\infty} \overline{\infty} \overline{\infty}$ $\overline{\infty} \overline{\infty}$

$\frac{1}{n-1} = -n+1 \Rightarrow -x^y + n + n-1 \Rightarrow x^y - yx + 2 \Rightarrow \Delta < 0$ (5)

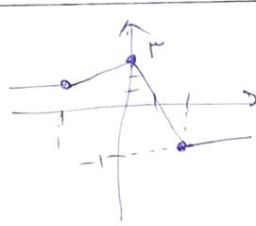
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2) $\left| \frac{r_n - 1}{n} \right| < \epsilon \Rightarrow -\epsilon < \frac{r_n - 1}{n} < \epsilon \Rightarrow \begin{cases} \frac{r_n - 1}{n} < \epsilon \Rightarrow \frac{1}{n} > 0 \Rightarrow n > 0 \quad (1) \\ -\epsilon < \frac{r_n - 1}{n} \Rightarrow 0 < \frac{r_n - 1}{n} \Rightarrow (-\infty, 0) \cup \left(\frac{1}{\epsilon}, +\infty\right) \quad (2) \end{cases}$
 $(1) \cap (2) = \left[\frac{1}{\epsilon}, +\infty\right)$

$$\begin{aligned} \text{b) } \left| \frac{x-r}{r_{n+1}} \right| > 1 &\Rightarrow \begin{cases} \frac{n-r}{r_{n+1}} > 1 \Rightarrow \frac{n+r}{r_{n+1}} < 0 \rightarrow \left[-r, -\frac{1}{r}\right] \text{ (I)} \\ \frac{x-r}{r_{n+1}} < -1 \Rightarrow \frac{n-1}{r_{n+1}} < 0 \rightarrow \left(-\frac{1}{r}, \frac{1}{r}\right] \text{ (II)} \end{cases} \\ \text{I} \cup \text{II} &= \left(-r, -\frac{1}{r}\right) \cup \left(-\frac{1}{r}, \frac{1}{r}\right) \end{aligned}$$

$$|n - \frac{1}{T}| < \frac{\alpha}{T} \rightarrow \alpha \geq \frac{1}{T} \quad B = \frac{\alpha}{T} < \frac{1}{T} \Delta$$

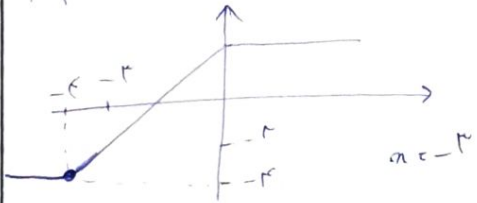
$$\left\{ \begin{array}{l} r < u \Rightarrow -1 \\ 0 \leq u \leq r \Rightarrow -r^2 u + r^2 \\ -1 < u < 0 \Rightarrow r^2 u + r^2 \\ u < -1 \end{array} \right.$$

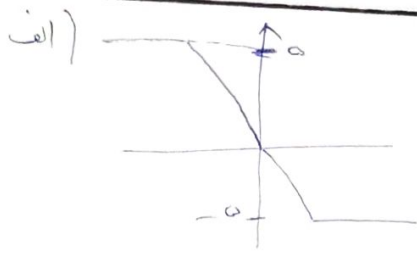


$$\frac{y_1 - \bar{y}}{y_1 - \bar{y} - P} = p$$

$$\frac{y_1 - \bar{y}}{y_1 - \bar{y} - P} = 1$$

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





$$\begin{cases} 1 < x = [-5] \\ -4 \leq x < 1 = [-2n-3] & (-5, -4, -3, \dots, 5, 6) \\ x < -4 = [a] \end{cases}$$

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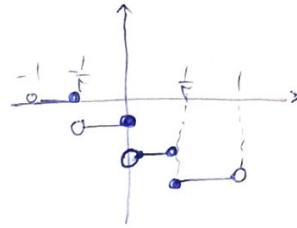
ب)

$$\frac{1}{x} = \left[1 + \frac{1}{x} \right] \Rightarrow \frac{1}{x} = \left[\frac{1}{n} \right] - 1 \Leftrightarrow 0 \leq \frac{1}{n} - \left[\frac{1}{n} \right] < 1 \Rightarrow -1 \leq \frac{1}{n} - \left[\frac{1}{n} \right] - 1 \Leftrightarrow [-1, 0)$$

الف)

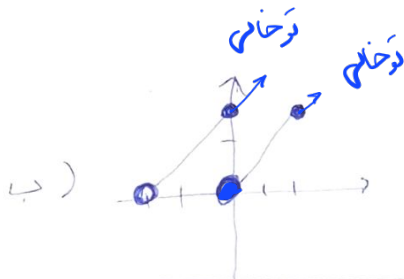
$$y = [-2n] - 1 \quad (-1, -\frac{1}{2})$$

$$\begin{aligned} [-\frac{1}{2}, 0] &= -1 \\ [0, \frac{1}{2}] &= -2 \\ [\frac{1}{2}, 1] &= -3 \end{aligned}$$



1,75

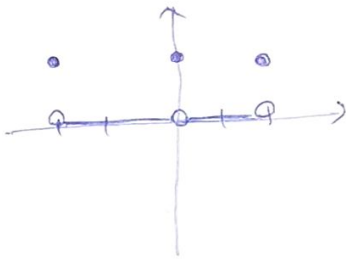
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$$\begin{aligned} (-2, 0) &= x+2 \\ [0, 2] &= x \end{aligned}$$

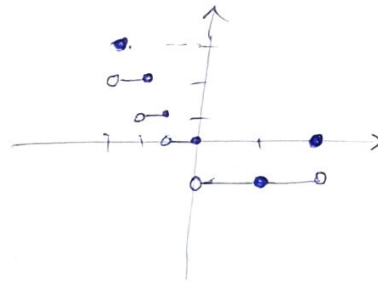
الف)

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



ب)

$$y = x^2 - 2n$$



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$$b - [a] = 2, 4 \rightarrow a, 4 = b \text{ اعداد صحیح}$$

$$\begin{cases} [b] - [a] = 2 \\ [a] + [b] = 4 \\ \hline 2[b] = 4 \Rightarrow [b] = 2 \Rightarrow [a] = 1 \end{cases}$$

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$$a = 1, 2$$

$$b = 3, 4 \rightarrow a + b = 4, 6$$

$$(1 + \sqrt{2})^4 = 191 - (1 - \sqrt{2})^4 = 191 - [(1 - \sqrt{2})^2]^2 = 191 - [3 - 2\sqrt{2}]^2 =$$

$$191 - [4 + 2 - 4\sqrt{2} - 4\sqrt{2}] = 191 - [8 - 8\sqrt{2}] = 191 - 8 + 8\sqrt{2} = 183 + 8\sqrt{2}$$

$$191 - 8 + 8\sqrt{2} = 183 + 8\sqrt{2} \Rightarrow [183, 191] = 190$$

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