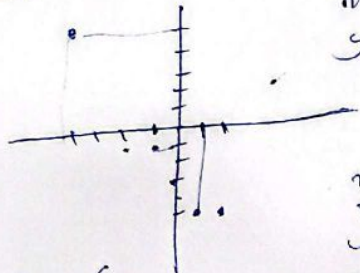


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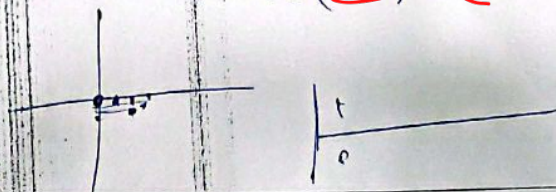
$$\begin{array}{c|cccc} x & 0 & 1 & 2 & 3 \\ \hline y & -2 & -1 & 0 & 0 \end{array}$$

$$\begin{array}{c|cccc} x & -1 & -2 & -3 & -4 \\ \hline y & -1 & -1 & 0 & 0 \end{array}$$

$$R = \{x | x \in \mathbb{Z}, x \in [-0, 0]\} \checkmark$$

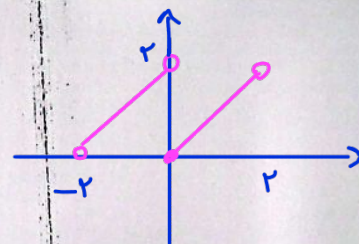
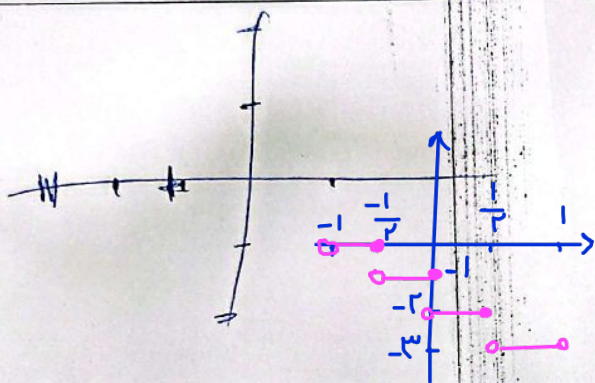
$$\frac{1}{n} - \left[1 + \frac{1}{n}\right] = \frac{1}{n} - 1 - \left[\frac{1}{n}\right] = \checkmark$$

$$\frac{1}{n} - 1 \Rightarrow R = (-\infty, \infty)$$

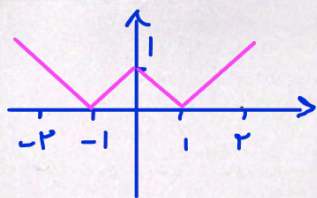


(1, 5)

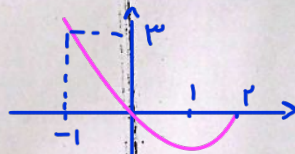
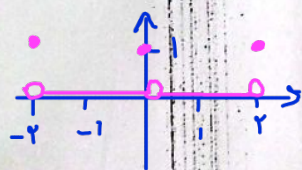
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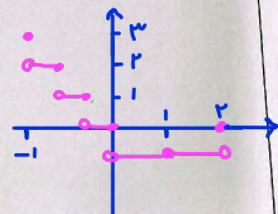
0
y



بشكل



بشكل



0
A

$$b - [a] = r, \epsilon \Rightarrow b = n + r, \epsilon$$

$$a + [b] = \epsilon, r \Rightarrow a = y + r, \epsilon$$

$$a + b = y + r, \epsilon + n + r, \epsilon = n + y + r, \epsilon$$

$$a = 1, r \checkmark$$

$$b = 0, \epsilon \checkmark$$

$$a + b = \epsilon, r \checkmark$$

(2)

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

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

[0-]

$$\left| \frac{n-2}{n+1} \right| > 1 \quad n \neq -\frac{1}{2}$$

جواب

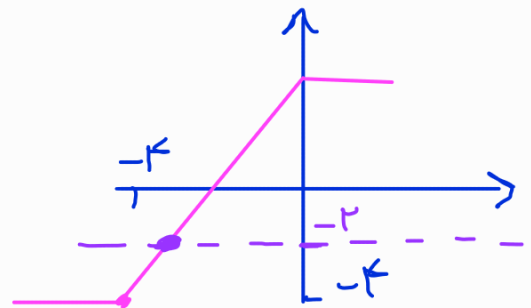
$$|n-2| > |n+1| \xrightarrow{\text{توان}} n^2 - 4n + 4 > n^2 + 2n + 1$$

$$3n^2 + 8n - 3 < 0 \rightarrow \frac{-3}{+1} \frac{1}{-1} \left(-3, \frac{1}{3} \right) = \left\{ -\frac{1}{3} \right\}$$

$$y' = \left| \frac{1}{2}(n+4) \right| - 2 + 1 = \left| \frac{1}{2}n + 2 \right| - 1$$

$$y = y' \rightarrow \left| \frac{1}{2}n \right| - 2 = \left| \frac{1}{2}n + 2 \right| - 1$$

$$\xrightarrow{\times 2} |n+4| - |n| = -2$$



-5

$$-4 < n < 0$$

$$n+4+n = -2 \rightarrow \boxed{n = -3}$$

$$\frac{1}{n} - \left[1 + \frac{1}{n} \right] = \frac{1}{n} - \underbrace{\left[\frac{1}{n} \right]}_{0 \leq < 1} - 1$$

جواب

$$\xrightarrow{-1} R = [-1, 0)$$