

$$f(n) = 2 \sin^2\left(n + \frac{\pi}{4}\right) - 1$$

$$\begin{aligned} -1 &\leq \sin \leq 1 \\ \Rightarrow -1 &\leq \sin^2 \leq 1 \\ 2 \times 0 - 1 &\leq 2 - 1 \\ 2 \times 1 - 1 &\leq 2 - 1 \end{aligned}$$

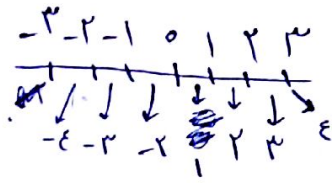
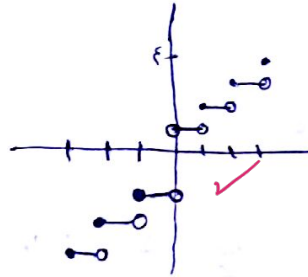
$$R = [-1, 1]$$

$$g(n) = 2 \cos^2 n - 4$$

$$\begin{aligned} -1 &\leq \cos \leq 1 \\ 2(-1)^2 - 4 &\leq 2 - 4 \\ 2(1)^2 - 4 &\leq 2 - 4 \end{aligned}$$

$$R = [-2, -2] \quad [-4, -4] \quad \therefore$$

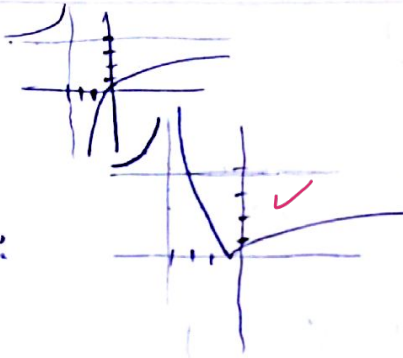
$$y = \frac{n}{|n|} + [n] \quad [-1, 1]$$



$$y = \left| \frac{\varepsilon n + 1}{n + 2} \right|$$

$$\frac{\varepsilon n + 1}{n + 2}$$

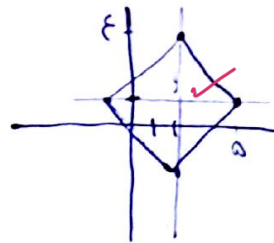
$$\left| \frac{\varepsilon n + 1}{n + 2} \right|$$



$$|n - 1| + |y - 1| = 2$$

مربع

$$\begin{cases} n > 1 & y > 1 \rightarrow y = 2 - n \\ n > 1 & y < 1 \rightarrow y = n + 1 \\ n < 1 & y > 1 \rightarrow y = n + 1 \\ n < 1 & y < 1 \rightarrow y = -n \end{cases}$$



$$f(n) = n + \frac{1}{n} + \sqrt{n + \frac{1}{n}}$$

$$n > \frac{1}{n} < 0 \rightarrow \infty$$

$$n > \frac{1}{n} > 0 \rightarrow n + \frac{1}{n} > 2$$

$$\sqrt{n + \frac{1}{n}} > \sqrt{2}$$

$$R = [2 + \sqrt{2}, +\infty)$$

$$y = (2 - \sin n)(1 + \sin n)$$

$$- \sin^2 n + 2 \sin n + 2$$

$$\sin \begin{cases} 1 \rightarrow 2 \\ -1 \rightarrow 0 \\ -\frac{b}{2a} \rightarrow 2 \end{cases}$$

$$R = [0, 2]$$

$$y = \frac{1}{x}n + 10$$

$$D = \text{مجموعة قيم } x \quad 10 - \frac{1}{x} > 10 - \frac{r}{x} > \dots > 10 - \frac{q}{x}$$

(2)

→

$$\text{مجموع السلسلة} = 9 \times 10 - \left(\frac{1}{x} + \frac{r}{x} + \dots + \frac{q}{x} \right) = 90 - \frac{90}{x} = \checkmark \text{ VAS}$$

$$\sqrt{an^2 + bn + c}$$

صفحة اخرى

$$D = [r_1, +\infty) \rightarrow a(n-r)^r$$

$$f(r) \geq 1 \rightarrow a(1)^r = 1 \rightarrow a = 1$$

$$\left\{ \begin{array}{l} n^r - \xi n + \xi \\ a \geq 1 \quad b = -\xi \quad c = \xi \end{array} \right.$$

$$g(n) = \sqrt{bn^2 + an - c} \quad R = ? \quad g = \sqrt{-\xi n^2 + n - 1} \quad \frac{-\Delta}{4a} = \frac{-1 \pm \sqrt{1-4}}{14} \quad \sqrt{\frac{-1 \pm \sqrt{1-4}}{14}} = \frac{C}{2}$$

$$f(n) = \frac{n^2 - \xi n}{n+r} \rightarrow \frac{n(n-r)(n+r)}{n+r} \geq n(n-r) \rightarrow [1, +\infty)$$

(2)

$$D = \mathbb{R} - \{a, b\} \quad a = -r \quad b = ? \quad n(n-r) = 1$$

$$R = [C, +\infty) - \{1\} \quad C = -1 \quad n = \xi \quad b = \xi$$

$$f\left(\frac{a+b}{rc}\right) \geq ? \quad \frac{-4 \pm \sqrt{16-4}}{-4} = \checkmark 1 \quad f(-1) = \checkmark$$

$$y = \sqrt{n^2 + an^2 + bn - 1}$$

(2)

$$n-r \neq 0 \rightarrow a = -4 \quad b = 11$$

$$D = [a, b]$$

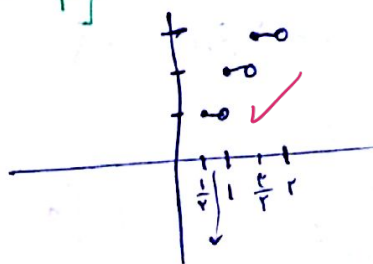
$$R = ? \quad [-1, \checkmark 0] \quad n-r \quad -4-r \geq -1 \quad 11-r \geq 10$$

$$y = [n] + \left[n + \frac{1}{r}\right]$$

(2)

$$\left[\frac{1}{r}, r\right]$$

مجموعة قيم



۷- با توجه به دامنه، زیر رادیکال یک خط با شیب مثبت بوده یعنی $a=0$ است و نقطه $(2,0)$ هم در معادله خط صدق می‌کند...

$$\begin{cases} (2,0) \rightarrow 2b+c=0 \\ (3,1) \rightarrow 3b+c=1 \end{cases} \rightarrow b=1 \text{ و } c=-2$$

$$g(x) = \sqrt{x^2+4} \rightarrow \text{ext} \Big|_4^0 \Rightarrow R_g = \sqrt{[4, +\infty)} = [2, +\infty)$$