

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

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

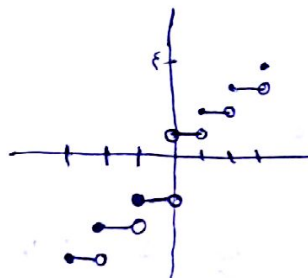
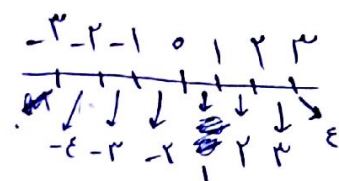
$$R = [-1, 1]$$

$$g(n) = 3 \cos^2 n - 4$$

$$\begin{aligned} -1 &\leq \cos \leq 1 & 3(-1) - 4 &= -7 \\ 0 &\leq \cos^2 \leq 1 & 3(1) - 4 &= -1 \end{aligned}$$

$$R = [-7, -1]$$

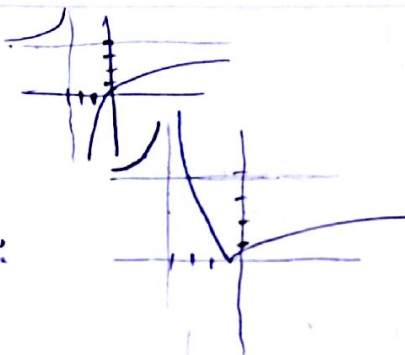
$$y = \frac{n}{|n|} + [n] \quad [-5, 5]$$



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

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

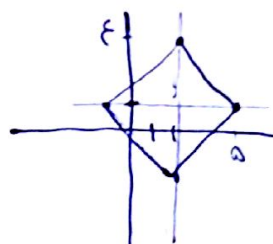
$$\left| \frac{\varepsilon n + 1}{n + 2} \right|$$



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

مربع

$$\begin{cases} n > 1 & y > 1 \rightarrow y = 4 - n \\ n > 1 & y < 1 \rightarrow y = n + 1 \\ n < 1 & y > 1 \rightarrow y = n + 1 \\ n < 1 & y < 1 \rightarrow y = -n \end{cases}$$



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

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

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

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

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

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

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

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

$$R = [0, 2]$$

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

$$D = \{10 - \frac{1}{x}, 10 - \frac{r}{x}, \dots, 10 - \frac{q}{x}\}$$

~~R = \emptyset~~

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

$$\sqrt{a_n^2 + b_n^2 + c}$$

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

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

$$\left\{ \begin{array}{l} n^r - \xi n + \xi \\ a \geq 1, b \in \mathbb{R}, c \in \mathbb{R} \end{array} \right.$$

$$g(n) = \sqrt{b n^r + a n - c} \quad R = ? \quad g = \sqrt{-\xi n^r + n - \Lambda} \quad \frac{-\Delta}{2a} = \frac{-12V}{14} \quad \sqrt{\frac{-12V}{14}} = \frac{C}{\Delta} \quad R = \emptyset$$

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

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

$$R = [C, +\infty) - \{\Lambda\} \quad C = -1 \quad \begin{array}{l} n = \xi \\ b = \xi \end{array}$$

$$f\left(\frac{a+b}{rc}\right) \geq ? \quad \frac{-4\xi}{-4} = -1 \quad f(-1) = 12$$

$$y = \sqrt{n^r + a n^r + b n - \Lambda}$$

$$a = -4 \rightarrow n-r \neq \rightarrow a = -4$$

$$b = 12$$

$$D = [a, b]$$

$$R = ? \quad [-1, 10]$$

$$n-r \quad -4-r \geq -1$$

$$12-r \geq 10$$

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

