

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

؟ جواب ۵

$$\frac{t^r + rt + 1 - 1t}{(t+1)^r} = \left(\sqrt{n + \frac{1}{n}} + 1 \right)^r - 1 \Rightarrow R_f = [1, +\infty)$$

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

$$\sin n = -\frac{b}{ra} \quad \begin{cases} \sin n = 1 \rightarrow -1 + r + r = r \\ \sin n = -1 \rightarrow -1 - r + r = 0 \end{cases}$$

$$R_f = [0, r]$$

$$f(n) = -\frac{1}{r}n + 1 \quad ۶$$

$$D_f = \{1, r, r, \dots, q\}$$

$$R_f = \left\{ 1 - \frac{1}{r}, 1 - \frac{r}{r}, \dots, 1 - \frac{q}{r} \right\}$$

$$q + \left(1 - \frac{1}{r} - \frac{r}{r} - \frac{r}{r} \dots - \frac{q}{r} \right) \cdot \frac{1 \times q \times r}{r} \times \frac{1}{r} = (va)$$

$$f(n) = 1 \quad \text{بر } [r, +\infty) \quad \text{فرض شود} \quad f(n) = \sqrt{a_n r + b_n + c} \quad ۷$$

$$g(n) = \sqrt{bn^r + an - rc}$$

$$\begin{aligned} &\text{بسط فاصله} \\ &\underline{a = ?} \end{aligned}$$

$$b + c$$

$$rb + c = 0$$

$$b > 0$$

$$g(n) = \sqrt{n^r + r}$$

$$R_g = [r, +\infty)$$

$$f(n) = \sqrt{rb + c} = \sqrt{b} =$$

$$b = 1$$

$$c = -r$$

$$f_{(n)} = \frac{n^r - r_n}{n+r} \quad \text{پل ۱}$$

$$[c, +\infty) - \{n\} \text{ و } \mathbb{R} - \{a, b\} \text{ قابل است. } \frac{n(n^r - c)}{n+r} = \frac{n(n-r)/(n+r)}{(n+r)}$$

$$n^r - r_n = 1$$

$$f\left(\frac{a+b}{rc}\right) \text{ مقدار}$$

$$n^r - r_n - 1 = (n-c)(n+r)$$

$$a, b = r, -r$$

$$n^r - r_n \rightarrow n_{\text{cat}} = 1 \quad 1-r = -1$$

$$f\left(\frac{r}{-r}\right) = f(-1) = -1(-1-r) = (r) \quad c = -1$$

۹ دانشنامه

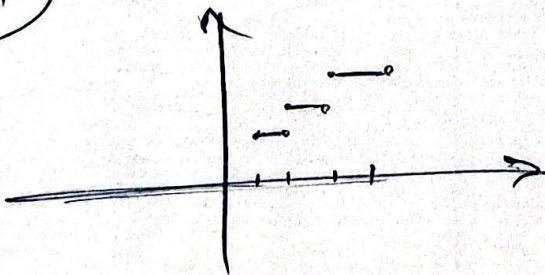
$$y = \sqrt[n]{n^r + a n^r + b n - 1}$$

$$y = \sqrt[n]{(n-r)^r} = \sqrt[n]{n^r - 1 + 9n - 4n^r}$$

$$a = -9 \quad b = 15$$

$$n-r \rightarrow R_f = [-1, 1] \quad R_f = [-9, 15]$$

۱۰ نمودار تابع $y = [2] + \left[n + \frac{1}{r}\right]$ از ضرایب مشخص شده رسم نمودار تابع $\left(\frac{1}{r}, r\right)$



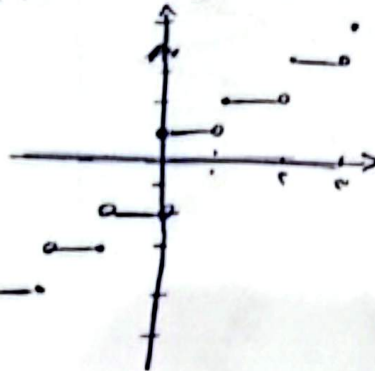
$$f(x) = \underbrace{\cos\left(x + \frac{\pi}{2}\right)}_{[0,1]} - 1 \Rightarrow R_f = [-1, 1]$$

$$g(x) = \underbrace{\cos x}_{[-1,1]} - 2 \Rightarrow R_g = [-3, -1]$$

د) نمودار تابع $\frac{x}{x+3} + [x]$ را در بازه $[-3, 3]$ رسم کنید

$$x \geq 0 : 1 + [x]$$

$$x < 0 : [x] - 1$$

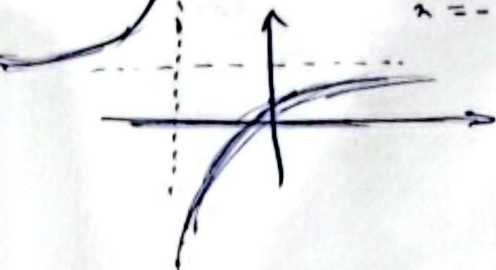


میانگین افقی: $y = 2$

$$y = \frac{x+1}{x+3}$$

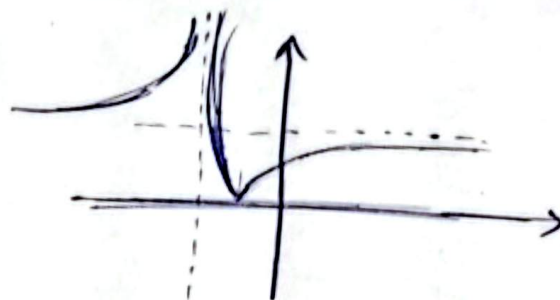
میانگین عمودی: $x = -3$

$$y = \left| \frac{x+1}{x+3} \right|$$



$$y = \left| \frac{x+1}{x+3} \right|$$

نسبت به محور x
قرینه می‌کنیم



$$|x-2| + |y-1| = 3$$

$$x > 2, y > 1 : x + y - 3 = 3 \rightarrow y = -x + 6$$

$$x > 2, y < 1 : x - 1 + 1 - y = 3 \rightarrow y = x - 3$$

$$x < 2, y > 1 : 2 - x + y - 1 = 3 \rightarrow y = x + 2$$

$$x < 2, y < 1 : 2 - x - 1 - y = 3 \rightarrow y = -x - 2$$

