

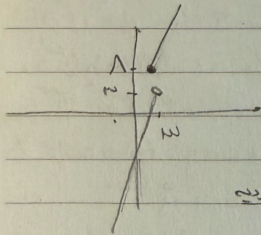
15/1/23

أبلا من فنتنا

$$f(x+1) = \begin{cases} 3x+3 & x \geq 1 \\ f_{n-1} & x < 1 \end{cases}$$

1. (2)

$$\text{if } x \geq 1 \rightarrow \begin{cases} 3x-4+1 \rightarrow 3x-3, x \geq 1, f(x) \\ f_{n-1}-1, f_{n-1}-9, n < 1 \end{cases} \left\{ \begin{array}{l} 3x-1 \quad x \geq 1 \\ f_{n-1}-9 \quad x < 1 \end{array} \right\} \text{صورت الديو}$$



$$y = f(n-1) - f(n+1) \leq 0$$

$$f(n-1) - f(n+1) \geq 0 \rightarrow f(n-1) \geq f(n+1)$$

$$\text{صورت الديو} \rightarrow 3x \geq x+1 \rightarrow 2x \leq 1 \rightarrow x \leq \frac{1}{2} \rightarrow D = (-\infty, \frac{1}{2}]$$

$$f(n) = (2^n + n)^n$$

2. (2)

$$f_0 f(n) < f(n^2) \rightarrow f(n) < 2^n \rightarrow (2^n + n)^n < 2^n$$

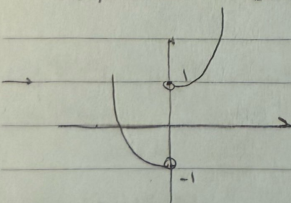
$$\rightarrow n^n + n < n \rightarrow 2^n < 0 \rightarrow 2 < 0 \rightarrow 2 \in (-\infty, 0) \checkmark$$

3. (2)

$$y = 2(n^2+1) \geq 0 \rightarrow 2(n^2+\frac{1}{2}) + n^2+1$$

270

$$n(n^2+\frac{1}{2}) + (2^n+1)$$

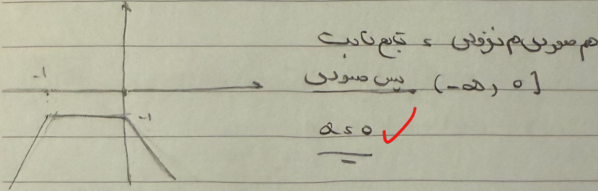


نكسوا

آیلا منورینا

۴. (۲)
$$f(x) = \frac{p_{n+1}}{(x-n+1)(x-n+2)\dots(x-n+1)} - 1$$

$x = \frac{1}{p}$

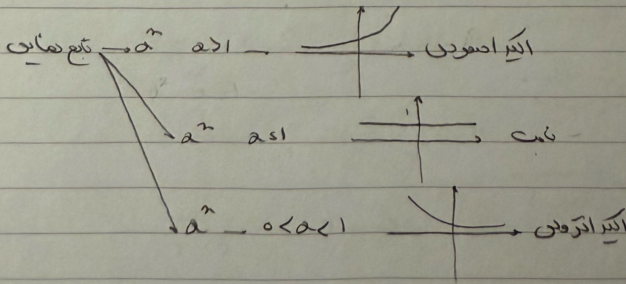


۵. (۲)
$$y = \log(x^2 - p_n - 1) \rightarrow x^2 - p_n - 1 = 0 \rightarrow x = \pm \sqrt{p_n + 1}$$

دایره اکبر اصغر و دایره اکبر اصغر
اکبر اصغر $\frac{1}{p}$

$$x^2 - p_n - 1 = 0 \rightarrow x = \pm \sqrt{p_n + 1} \rightarrow x = \pm \sqrt{p_n + 1} \rightarrow x = \pm \sqrt{p_n + 1}$$

۶. (۱، ۵)
(اغت)



$$a^x - 1 > 0 \rightarrow a^x > 1 \rightarrow a^x - 1 > 0 \rightarrow (a-1)(a-1) > 0 \rightarrow (-\infty, -1) \cup (1, +\infty)$$
 ✓

$$a^x - 1 \geq 1 \rightarrow a^x \geq 2 \rightarrow (a-1)(a-2) > 0 \rightarrow (-\infty, 2] \cup [2, +\infty)$$
 (۱)

$$a^x - 1 = 0 \rightarrow a = \sqrt[p]{p}$$
 (۲)

آیلا عرفان

(۱، ۲)

$$f(m) \rightarrow [2, 1] \rightarrow \underbrace{2 - [1]}_{[0, 1]} \rightarrow f(m) \rightarrow R \rightarrow [1, 3]$$

۱۰- (۱)

$$R \rightarrow D \rightarrow g(x) = \frac{2^m - 2^{-m}}{2} \rightarrow \frac{2 - \frac{1}{2}}{2} \rightarrow \frac{-10}{2}$$

چون راحت تره
نصف کنه نو میم

$$g(x) = \frac{2^m - 2^{-m}}{2} \rightarrow \frac{2 - \frac{1}{2}}{2} \rightarrow \frac{4 - 1}{4} = \frac{3}{4}$$

$$R \rightarrow g(x) = \left(\frac{10}{2}, \frac{4}{4} \right) = \left(\frac{-10}{2}, \frac{3}{4} \right)$$