

۲. آفرین خوب نوشتن

ریشه عبارت $f(m) = \sqrt{(m-1)m^2 + am + b}$

داده تقریب عبارت درجه ۲ $\Rightarrow a-1=0 \Rightarrow a=1$
 $[a, b] \Rightarrow (-\infty, 4] \cup [b, +\infty)$
 $4+b=0 \Rightarrow b=-4$
 ریشه $m+b$ (۳) است

$D = \mathbb{R}$

$f(m) = \sqrt{m^3 + m^2 + m - m^4}$

$m^4 + m^3 + m^2 - m^4 \geq 0$

$\Rightarrow 0 \leq 0 \Rightarrow m^3 - m + m^2 \geq 0 \Rightarrow m^2(m-1) \geq 0$
 انداز حد آخر و حداقل مقدار معنی برای $m^2 \leq 1 \Rightarrow -1 \leq m \leq 1$

$f(m) = \sqrt{4 - m^4}$

$\Rightarrow 4 - m^4 \geq 0 \Rightarrow m^4 \leq 4 \Rightarrow -\sqrt{2} \leq m \leq \sqrt{2}$

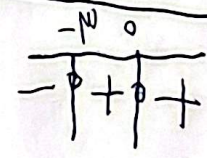
$g(m) = [m] + [-m] + 1$
 if $m \in \mathbb{Z}$ $g(m) = 0 + 1 = 1$
 if $m \in \mathbb{Z}'$ $g(m) = -1 + 1 = 0$

$m \in \{-\sqrt{2}, -1, 0, 1, \sqrt{2}\}$

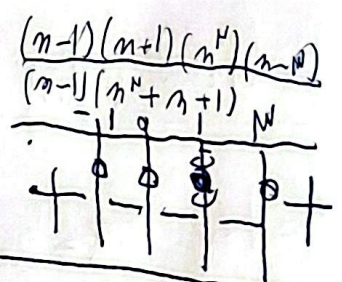
عدد صحیح

$y = \sqrt{m^3 + m^4} = \sqrt{m^3(m+1)}$
 $D = [-1, +\infty)$

$\Rightarrow m^3(m+1) \geq 0$



$y = \sqrt{\frac{(m^2-1)(m^4-m^2)}{m^3-1}} = \sqrt{\frac{(m-1)(m+1)(m^2)(m-1)}{(m-1)(m^2+m+1)}}$



$D = [-\infty, -1] \cup [1, +\infty) \cup \{0\}$

الف $\sqrt{|m-1|-3}$

$|m-1| \geq 3 \Rightarrow m-1 \geq 3 \vee m-1 \leq -3$
 $m \geq 4 \vee m \leq -2$

$D = [-\infty, -2] \cup [4, +\infty)$

ب $\sqrt{4 - |m-1|}$

$|m-1| = |m-1|$

$-1 \leq m \leq 1$

$|m-1| \leq 4$

$\Rightarrow -3 \leq m-1 \leq 3 \Rightarrow [-2, 4]$

$$الف) y = \sqrt{1-n|n|}$$

$$D_f = (-\infty, 1]$$

$$ب) \frac{1}{\sqrt{1-n|n|}} - 1$$

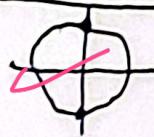
$$1-n|n| \geq 0 \Rightarrow n \leq 1 \text{ or } n \geq -1 \Rightarrow n \in (-1, 1]$$

$$1-n|n| \neq 0 \Rightarrow n \neq 1 \text{ or } n \neq -1 \Rightarrow n \in (-1, 1)$$

$$D = (-1, 1)$$

$$الف) \frac{\sin^p n - 1}{\cos n}$$

$$\cos n \neq 0$$



$$D = \mathbb{R} - \left\{ k\pi + \frac{\pi}{2} \right\}$$

$$ب) \frac{\cos n}{1 - \cos n}$$

$$1 - \cos n \neq 0$$

$$\cos n \neq 1$$



$$D = \mathbb{R} - \left\{ k\pi \right\}$$

$$الف) y = \frac{n+1}{n+1}$$

$$D = \mathbb{R} - \left\{ -\frac{1}{p} \right\}$$

$$0 \neq |n+1| - |n+1|$$

$$ب) \sqrt{|n+1| - |n+1|}$$

$$D_f = (-\infty, \frac{1}{p}] \cup [\frac{1}{p}, \infty)$$

$$f_n = \sqrt{\log_{\log} (p_{n-1})}$$

$$p_{n-1} > 0 \Rightarrow n > \frac{1}{p}$$

$$\log_{\log} p_{n-1} > 0$$

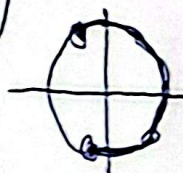
$$\log_{\log} p_{n-1} \geq 0$$

$$D = (1, \infty)$$

$$\log_{\log} p_{n-1} \leq 0$$

$$p_{n-1} \leq 0 \Rightarrow n \leq \frac{1}{p}$$

$$الف) y = \log(p_{n-1} \cos n + 1)$$



$$p_{n-1} \cos n + 1 > 0$$

$$\cos n \geq \frac{1}{p_{n-1}}$$

$$D = \left(k\pi - \frac{\pi}{p}, k\pi + \frac{\pi}{p} \right)$$

$$ب) y = \sqrt{\log \frac{n-1}{n+1}}$$

$$D = (-\infty, -1)$$

$$\log \frac{n-1}{n+1} \geq 0$$

$$\frac{n-1}{n+1} \geq 1$$

$$\frac{n-1}{n+1} \geq 1$$

$$\frac{n-1}{n+1} \geq 1 \Rightarrow n \leq -1$$