

$y = \sqrt{|n-1|} [n-2]$
 $|n-1| [n-2] \geq 0$
 $|n-1| = 0 \Rightarrow n=1$
 $[n-2] = 0$
 $[n]-2=0 \Rightarrow [n]=2 \Rightarrow 2 \leq n < 3$
 $D_y = [2, +\infty) \cup \{1\}$

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$n \in (2, +\infty) \cup \{1\}$

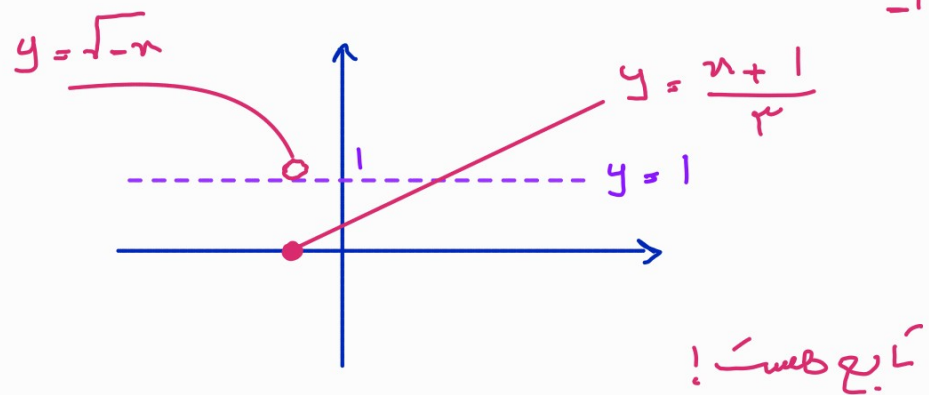
$y = \frac{1}{||n-2|-1|-k}$
 $||n-2|-1|-k \neq 0$
 $||n-2|-1| = k$
 $|n-2|-1 = k$
 $|n-2| = k+1$
 $n-2 = k+1$
 $n = k+3$
 $|n-2|-1 = -k$
 $|n-2| = -k+1$
 $n-2 = -k+1$
 $n = -k+3$
 $D_y = \mathbb{R} - \{0, 2, 4\}$

$f(n) = \frac{n^2 + 3n + 2}{n^2 + 3n + 2}$
 $n^2 + 3n + 2 \neq 0$
 $n \neq -1, -2$
 $I = n^2 + 3n + 2 = (n+1)(n+2) = 0 \Rightarrow n = -1, -2$
 $II = n-1=0 \Rightarrow n=1$
 $III = n+1=0 \Rightarrow n=-1$
 $D_f = \mathbb{R} - \{-1, -2, 1\}$

$y = \log_{n+1} \log_n \frac{1}{n}$
 $III: \log \frac{1}{n} > 0 \Rightarrow -\log n > 0 \Rightarrow \log n < 0$
 $I: n+1 > 0 \Rightarrow n > -1$
 $II: n > 0$
 $I \cap II \cap III: n = (0, 1)$

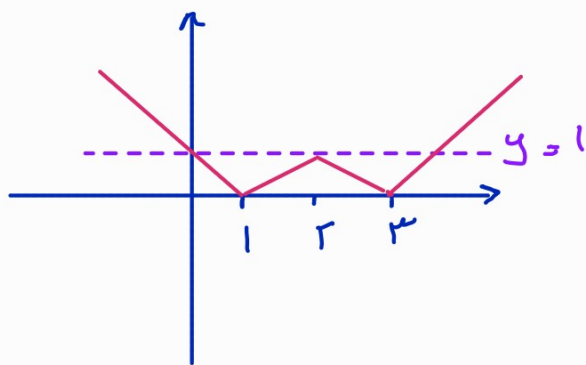
$f(n) \rightarrow -a \leq n \leq a$
 $f(n^2-1) \rightarrow -a \leq n^2-1 \leq a \Rightarrow -a+1 \leq n^2 \leq a+1$
 $n = \left[-\sqrt{\frac{a+1}{n^2}}, \sqrt{\frac{a+1}{n^2}}\right]$

$$y = \begin{cases} \frac{n+1}{3} & y \geq 0 \\ \sqrt{-n} & y > 1 \end{cases}$$



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$$||n-2|-1| = k \rightarrow \text{۳ ریشه دارد}$$



شکل تابع را با خط قطع می‌دهیم:

چون ۳ نقطه برخورد دارند پس $k = 1$ بوره!