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$y = \sqrt{(n-r)[n-r]} \rightarrow (n-r)[n-r] \geq 0 \rightarrow \frac{r}{0} \oplus \frac{r}{0} \rightarrow D_f(\mathbb{R})$ (r)
 $[n-r] = 0 \rightarrow \begin{cases} n-r < 1 \\ r \leq n < r \end{cases}$
 $y = \sqrt{|n-1|[n-r]} \rightarrow |n-1|[n-r] \geq 0 \rightarrow \frac{1}{-0} \oplus \frac{r}{0} \oplus \frac{r}{0} \rightarrow D_f: \{1\} \cup [r, +\infty)$ (r)

$y = \frac{1}{|n-r|-1-k} \rightarrow |n-r|-1-k = 0 \rightarrow |n-r|-1 = k \rightarrow |n-r| = k+1$ (r)
 $|n-r|-1 = -k \rightarrow |n-r| = 1-k$
 $n-r = k+1$
 $n-r = -k-1$
 $n = \begin{cases} k+1 \\ -k-1 \end{cases} \rightarrow \begin{cases} k+1 \\ -k-1 \end{cases} \rightarrow \begin{cases} k+1 \\ -k-1 \end{cases} \rightarrow \begin{cases} k+1 \\ -k-1 \end{cases} \rightarrow \begin{cases} k+1 \\ -k-1 \end{cases}$
 $k+1 \leq 1 \rightarrow k \leq 0$
 $-k-1 \leq 1 \rightarrow -k \leq 2 \rightarrow k \geq -2$
 $k \in [-2, 0]$ (r)

$f(n) = \frac{n^r + n^{r+1}}{n^r + n^{r+1}} \rightarrow \frac{n+1}{n-1}$ (r)
 $\frac{n+1}{n-1} \neq 0 \rightarrow n \neq -1$
 $n-1 \neq 0 \rightarrow n \neq 1$
 $D_f: \mathbb{R} - \{-1, 1\}$
 $n = r$ (r)
 $n^r - r n x + r n = n^r - 4n + 4 = (n-r)^r \rightarrow \frac{r}{1}, (1)$

$y = \log_{n+1} \log_n^{\frac{1}{n}}$ (r)
 $\log_{n+1}^{\frac{1}{n}} > 0 \rightarrow \frac{1}{n} > n \rightarrow \frac{1}{n} > 1 \rightarrow n < 1$ (r)
 $\frac{1}{n} < n \rightarrow 0 < n < 1$ (r)
 $D_f: (0, 1)$ (r)

$D_{f(n)} = [-a, a]$ (r)
 $-a \leq n^r - 1 \leq a$
 $D_{f(n^r-1)} = ? \rightarrow \frac{1}{\sqrt{a}} \leq n \leq \frac{r}{\sqrt{a}}$ (r)
 $n^r \geq -r \rightarrow n \geq -\frac{r}{r} \rightarrow R$
 $D_f: \left[\frac{-r}{\sqrt{a}}, \frac{r}{\sqrt{a}} \right]$ (r)

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

شکل تابع را با حفظ قطع مردهیم:

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

