

1- دانه
 $y = \frac{n+3}{n^3 + 3n^2 - 11n + 3} \rightarrow 0$ معضله = 0
 $n^3 + 3n^2 - 11n + 3 = 0 \rightarrow$ معضله = 0
 $n^3 + 3n^2 - 11n + 3 = 0 \rightarrow$ معضله = 0

$n^3 + 3n^2 - 11n + 3 = 0$
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$P_f = R - \{1, -\frac{1}{3}\}$

$P_f = R - \{-1, -\frac{1}{3}, -\frac{1}{2}\}$

2- دانه
 $y = \frac{n+3}{n^3 - 3n^2 + 3n - 1} \rightarrow \neq 0$
 $n^3 - 3n^2 + 3n - 1 = 0$
 $n^3 - 3n^2 + 3n - 1 = 0$
 $n^3 - 3n^2 + 3n - 1 = 0$

$y = \frac{n+3}{n^3 - 3n^2 + 3n - 1} \rightarrow 1$
 $n^3 - 3n^2 + 3n - 1 = n+3$
 $n^3 - 3n^2 + 3n - 1 = n+3$
 $n^3 - 3n^2 + 3n - 1 = n+3$

$n < 1$ $n > 1$
 $(0, -3)$ $(2, 5)$
 $(0, -3)$ $(2, 5)$

$y = \frac{2}{n^2 - 2n + 1 - 3n + 5}$
 $n^2 - 2n + 1 - 3n + 5 = 0$
 $n^2 - 5n + 6 = 0$
 $n^2 - 5n + 6 = 0$

3- دانه
 $y = \frac{n+3}{|n+1| - |n+3|} \neq 0$
 $|n+1| - |n+3| = 0$
 $|n+1| - |n+3| = 0$
 $|n+1| - |n+3| = 0$

$y = \frac{n+3}{|n+1| - |n+3|} \rightarrow 2 - \frac{2}{n}$
 $|n+1| - |n+3| = 2 - \frac{2}{n}$
 $|n+1| - |n+3| = 2 - \frac{2}{n}$
 $|n+1| - |n+3| = 2 - \frac{2}{n}$

4- دانه
 $y = \log_r(1 - \log_r n)$
 $1 - \log_r n > 0 \rightarrow \log_r n < 1 \rightarrow n < r$
 $1 - \log_r n > 0 \rightarrow \log_r n < 1 \rightarrow n < r$
 $1 - \log_r n > 0 \rightarrow \log_r n < 1 \rightarrow n < r$

$y = \log_r(1 - \log_r n)$
 $1 - \log_r n > 0 \rightarrow \log_r n < 1 \rightarrow n < r$
 $1 - \log_r n > 0 \rightarrow \log_r n < 1 \rightarrow n < r$
 $1 - \log_r n > 0 \rightarrow \log_r n < 1 \rightarrow n < r$