

$$\begin{array}{c|c|c} & 1 & 3 \\ \hline + & 1 & - & 3 & + \end{array} \rightarrow r \times 1 = \frac{b}{1} \rightarrow b = 3$$

$$\frac{a}{1} = r+1 = r = a \rightarrow a+b = r+r = \textcircled{7}$$

$$r_n = -1 \rightarrow n = \frac{1}{r}$$

~~$$-r(k+1)(m-1) = 0$$~~

~~$$r(k+m) = a$$~~

$$n=r \rightarrow r(k-1+n-1) = 0$$

~~$$r(k+m) = a$$~~

$$r(k+m) = a \rightarrow \frac{a}{\frac{1}{r}} + 1 = \textcircled{-13}$$

$$n = -\frac{1}{r} \text{ و } 6$$

$$(n+3)(n-1)$$

$$\begin{array}{c|c|c} & -2 & 6 \\ \hline - & 1 & + & 3 \end{array}$$

$$-\frac{1}{r}n^2 + 2n + 6 > \frac{1}{r} \rightarrow -\frac{1}{r}n^2 + 2n + \frac{6}{r} > 0$$

$$\rightarrow n = -1 \text{ و } 6 \rightarrow \begin{array}{c|c|c} & -1 & 6 \\ \hline - & 1 & + & 3 \end{array} \rightarrow \textcircled{6+1=7}$$

$$n^3 - 3n^2 - n + 3 < 0$$

$$(n-3)(n+1)(n-1) < 0$$

$$\begin{array}{c|c|c|c} & -1 & 1 & 3 \\ \hline - & 1 & + & 3 \end{array}$$

$$n > 0 \rightarrow (1, 3) \rightarrow \textcircled{f(x) = -3}$$

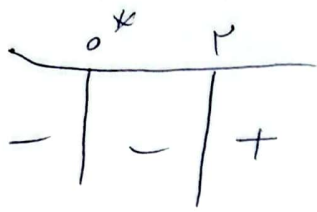
$$a-1 < 0 \rightarrow a < 1$$

$$a^2 + 1 - 2a - 2a + 2 < 0$$

$$\rightarrow a^2 - 4a + 3 < 0$$

$$\begin{array}{c|c|c} & 1 & 3 \\ \hline + & 1 & - & 4 & + \end{array} \rightarrow (1, 3)$$

منبع مقدار a



$$\rightarrow r < m$$

$$\frac{m(m(m^r + 1))}{m - r}$$

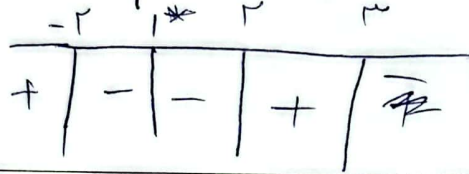
6



$$n = \frac{r-1}{2}$$

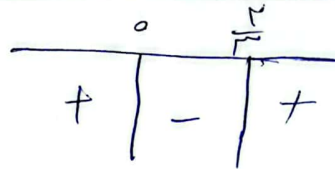
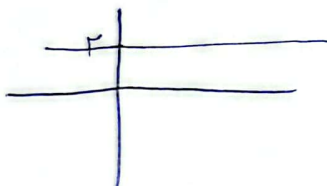
$$n^* = 1$$

$$n = r$$



$$\rightarrow [-r, 1] \cup [r, +\infty)$$

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$$\frac{r^n - rn}{n^r + r} < 0 \rightarrow r^n - rn < r^{n+1} \rightarrow n^r - rn - 1 < 0$$

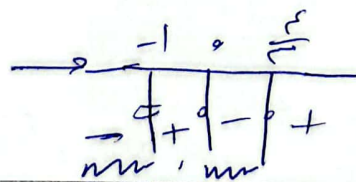
$$\textcircled{r + r = 2} \leftarrow (-r, r) \leftarrow \begin{array}{c} -r & r \\ + & - & + \end{array}$$

$$\frac{r^n - rn + n + 1}{n + 1} < 0 \rightarrow \frac{r^n - r^{n+1}}{n + 1} \rightarrow \frac{-1}{-r + r} \rightarrow (1, +\infty)$$

$$\textcircled{r + r = 2} = \left(\frac{0}{r}, \frac{r}{r} \right)$$

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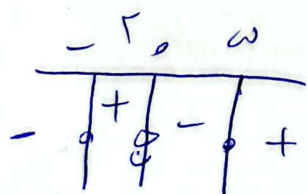
$$\frac{r^n - rn}{n + 1} < 0$$



$$\rightarrow (-\infty, -1) \cup (0, \frac{r}{r})$$

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$$\frac{r^n - 1}{n} = r < 0 \rightarrow \frac{r^n - r^{n-1}}{n} < 0$$



$$\rightarrow (-\infty, -r] \cup [0, \infty)$$

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