

$$\frac{1}{+|-|+}$$

$$\textcircled{1} \rightarrow 1 - a + b = 0 \quad -r + (a - rb) = 0$$

$$\textcircled{2} \rightarrow a - ra + b = 0 \quad a - ra + b = 0$$

$$r + f = v$$

$$a - rb = 0 \quad (b = r) \Rightarrow (a = \varepsilon)$$

$$\textcircled{3} ((k-r) - (m-1)) (- (r-n))' = 0$$

$$-1 - rn = 0$$

$$-k + 1 = m = 0$$

$$n = -1/r$$

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$$\textcircled{4} \rightarrow (rk - n + m - 1) (\varepsilon - rn)' = 0$$

$$rk + m - 1 = 0$$

$$rn = -1 \quad n = -1/r \quad m = 1 - rk$$

$$g = ((k-r)n + (1 - rk) - 1) (m + 1/r)' \rightarrow g = ((k-r)n + 1 - rk) (m + 1/r)'$$

$$((k-r)n + 1 - rk) > 0 \rightarrow k > r \rightarrow (k=1) \in \mathbb{N}$$

$$k=1 \quad m = 1 - r = 0 \quad n = -1/r \quad \frac{m}{n} + k = -1 + 1 = 0 \quad (1 \in \mathbb{N})$$

$$\textcircled{5} \frac{1}{r} a^r + r m + 1 > \frac{1}{r}$$

$$-m^r + \varepsilon m + 1 > 0$$

$$m^r - \varepsilon m - 1 < 0$$

$$(a-a)(m+1) \quad \frac{-1 \quad a}{+|-|+}$$

$$(-1, a) \quad b - a = a + 1 = 0$$

$$\textcircled{6} n(m^r - m - 1) + r$$

- $\textcircled{I} \rightarrow 1 - r - 1 + r = 0$
- $\textcircled{II} \rightarrow r - r - r + r = 0$
- $\textcircled{III} \rightarrow -1 - r + 1 + r = 0$

$$f(r) = 1 - (r - 1)^r - r < 0$$

$$(a, b) = (1, r)$$

$$\frac{r+r}{r} = r \quad \underline{f(r) = -r}$$

$$f\left(\frac{a+b}{r}\right) = -r$$

$$\textcircled{7} a - 1 < 0 \quad a < 1$$

$$\Delta < 0 \quad (a-1)^r - f(a-1) \rightarrow (a-1)(a-a) < 0$$

$$a < 1 \rightarrow \textcircled{\phi} \quad 1 < a < a$$

$$\textcircled{8} \frac{m^r + m^r}{m-r} \quad m^r(m^r + 1) \quad m^r \cdot m^r - 1$$

$$m^r$$

$$\textcircled{9} \rightarrow m = r$$

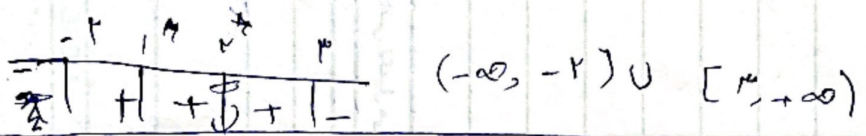
$$\rightarrow m < r \rightarrow m > r$$

$$\frac{(n^2 - n - 4)(n-1)^2}{(n^2 + n + 1)(n-m)^2} \neq 0$$

$$\frac{(n-2)(n+2)(n-1)^2}{(n^2 + n + 1)(n-m)^2}$$

$$\Delta = -2 < 0$$

$\begin{cases} + & n < 2 \\ - & n > 2 \end{cases}$



3) $f(n) = \frac{n^2 - 2n}{n^2 + 2} \geq 2$

$$\frac{n^2 - 2n}{n^2 + 2} \geq 2 \Rightarrow n^2 - 2n \geq 2(n^2 + 2) \Rightarrow n^2 - 2n < 2n^2 + 4$$

$$-2n < n^2 + 4 \Rightarrow n^2 - 2n - 4 < 0 \Rightarrow (n-2)(n+2) < 0$$

$$(-2, 2) \Rightarrow \sum_{r=2}^2 (4) \quad -2 < n < 2$$

4) $-1 < \frac{n^2 - 2n}{n+1} < 0$ $\frac{n(n-2)}{n+1} \quad n \geq 0 \quad n \geq \frac{2}{3}$

$$\frac{n^2 - 2n}{n+1} < 0 \Rightarrow \frac{-1 \cdot \frac{2}{n}}{-1+1-\frac{1}{n}} \Rightarrow (-\infty, -1) \cup (0, \frac{2}{n})$$

$$\frac{n^2 - 2n}{n+1} > -1 \Rightarrow \frac{n^2 - 2n - (-n - 1)}{n+1} > 0$$

$$n+1 > 0 \Rightarrow n > -1 \Rightarrow (-1, +\infty) \quad \Delta = 9 - 1 = 8 > 0$$

$$(0, \frac{2}{n})$$

5) $\frac{n^2 - 1}{n} \geq 1$ $\frac{n^2 - 1 - n}{n} \geq 0$ $\frac{n^2 - n - 1}{n} \geq 0$ $\frac{(n-2)(n+1)}{n}$

$$n_1 \geq 0 \quad n_2 = -1$$

$$\frac{-1 \cdot 1}{-1+1-\frac{1}{n}} \Rightarrow$$

$$\frac{n^2 - 1}{n} \geq 1 \Rightarrow (0, 2)$$

$$(-\infty, -1] \cup (0, 2]$$