

$$z^r \leq r^{A+B} \rightarrow r \leq 1, r$$

(1)

$$r^r \leq r^{A+B} \quad r \leq r^{A+B}$$

$$1 \leq r^{A+B} \quad (0 \leq A+B) r-1 \rightarrow$$

$$rA \leq r \rightarrow A \leq 1 \rightarrow B \leq -1$$

$$f(x) \leq r^{x+1} \rightarrow f(0) \leq \frac{1}{r} \rightarrow (0, \frac{1}{r})$$

$$\log_r \frac{r^{x+1}}{r^x} \leq x+1 \rightarrow \log_r r^{x+1} \leq r^{x+1}$$

(2)

$$(a-r)(a-\omega) \leq 0 \rightarrow a \leq r, \omega \leq r^x$$

$$\log_r r \leq x / \omega \leq r^x \quad \log_r \omega \leq x$$

$$\log_r r + \log_r \omega \leq \log_r r^x$$

$$\log_r r \leq \log_r r - \log_r r \rightarrow \log_r r \leq 1 - m$$

(3)

$$m^r + (r-rm+m)(r-rm+rm) \leq m^r \quad m^r + \dots \leq \dots$$

$$r \log \frac{(1-x)}{1-x} + r \log \frac{(1-x)}{x} \leq 0 \quad \log \frac{1-x}{x} \leq 1 \rightarrow$$

(4)

$$(x^r + r^r + \epsilon)(x-r) \leq x^r + rx^r + \epsilon x - rx^r - \epsilon x \rightarrow$$

(5)

$$\leq x^r - r \quad \log_r x^{r-1} \leq r \rightarrow x^r - r \leq r \rightarrow x^r \leq 1+r$$

subject _____

$$\log_{\frac{r}{r-1}}^{\frac{r}{r-1}} = \frac{r}{r-1} \times \log_{\frac{r}{r-1}} r = \frac{r}{r-1} \times \log_{\frac{r}{r-1}} r$$

$$\log_{\frac{r}{r-1}} \frac{-(r-1)}{(r+1)^r} = \frac{1}{(r+1)^r} \quad \text{--- (9)}$$

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$$a \log^r - a + b \log^r = 0$$

(10)

$$b \log^r = a - a \log^r \quad b \log^r = a(1 - \log^r)$$

$$\frac{b}{a} = \frac{\log^{10} - \log^r}{\log^r} = \frac{\log^{\omega}}{\log^r} = \log^{\frac{\omega}{r}}$$

$$(\sqrt{r})^{\log^{\omega}} = \omega \log^{\frac{\omega}{r}} = \omega \frac{1}{r} \log^r = \omega \frac{1}{r} = \sqrt{\omega}$$