

$$f(x) = a + a[x] + b[a] + b[x] + b \quad (1)$$

$$\lim_{x \rightarrow 1^+} f(x) = ra + rb + b[a]$$

$$\lim_{x \rightarrow 1^-} f(x) = a + b + b[a]$$

$$\Rightarrow ra + rb + b[a] = a + b + b[a] \Rightarrow a + b = 0$$

$$f(a) = (a+rb)[a] + ab = -a[a] - a^r$$

$$\frac{a[a]}{f(a)} = \frac{a[a]}{-a[a] - a^r}$$

(4)

$$\xrightarrow{x=a} a^r + am + n = 0$$

$$\lim_{x \rightarrow a} \frac{x^r + mx + n}{a - x} = r$$

$$\Rightarrow \lim_{x \rightarrow a} \frac{rx + m}{-1} = r \Rightarrow rx + m = -r \xrightarrow{x=a} \Sigma a^r + rma + n = -\Sigma a$$

$$f(ra) = \frac{\Sigma a^r + rma + n}{-a} = 0 \Rightarrow \Sigma a^r + rma + n = 0$$

$$-\Sigma a + n = 0 \Rightarrow n = \Sigma a$$

$$n - m = \Sigma a - (-r - ra)$$

$$= \Sigma a + r$$

(5)

$$\lim_{x \rightarrow 1^+} f(x) = 1 - a + -r(ca^r - 1)$$

$$\lim_{x \rightarrow 1^-} f(x) = 1 - ca^r$$

$$1 - a + -r(ca^r - 1) = 1 - ca^r$$

$$1 - ca^r - a = 0 \Rightarrow a = \frac{r}{c} \quad \checkmark$$

$$\Rightarrow b = \frac{1}{r}$$

$$\hat{u}, \hat{c}, \hat{l}, \hat{r}$$

(1)

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

$$ra^r + (m-r)a^r + a^r = 0$$

$$ra^r + (m-r)a^r = 0$$

$$\Rightarrow a = 0$$

$$\Rightarrow a = -\frac{r}{r}$$

(2)

$$x = 1$$

$$\begin{cases} 1 + a + b = 0 \\ 0 - a + b = 0 \end{cases}$$

$$\Rightarrow a = r$$

$$b = -c$$

$$\left[\frac{-c - \Sigma}{c} \right] = -r$$

(3)

$$f(1) = \tan \frac{c\pi}{\Sigma} = -1$$

$$\lim_{x \rightarrow 1^+} \frac{|x^r + n - r|}{a(x-1)} = \lim_{x \rightarrow 1^+} \frac{x^r + n - r}{a(x-1)}$$

$$= -\frac{r}{a} = -1 \Rightarrow a = r$$

$$f(0) = b(0 - [-a]) = 1 \cdot b$$

$$\lim_{x \rightarrow 0^-} \frac{|x^r + n - r|}{a(1-x)} = \frac{ra + 0 - r}{r \cdot 1 - \Sigma} = \frac{r}{c}$$

$$\Rightarrow b = \frac{r}{c} \Rightarrow b = -\frac{r}{c}$$

$$ab = -\frac{r}{c} \times c = -\frac{r}{10}$$