

$$g'(n) = (r(1 + \tan^2 n) + \sqrt{r} \sin n) \neq (\tan^2 n + \sqrt{r} \cos n) \quad -1$$

$$g'(\frac{\pi}{4}) = (1 - 1) \neq (r) \Rightarrow \frac{\sqrt{r}}{r} = \neq (r) \quad (2)$$

$$\neq(n) = \frac{(r + \cos n)(1 - r \cos n + \cos^2 n)}{(r + \cos n)(r - \cos n)} = \frac{1 - r \cos n + \cos^2 n}{r - \cos n} \quad -r$$

$$\neq - r g'(\frac{\pi}{4}) = (\neq - r g)(\frac{\pi}{4})$$

$$\neq - r g(n) = \frac{-r \cos n + \cos^2 n}{r - \cos n} = -\cos n \quad (2)$$

$$\Rightarrow (\neq - r g)'(n) = \sin n \Rightarrow (\neq - r g)(\frac{\pi}{4}) = -\frac{1}{r}$$

$$|\neq_+(\frac{\pi}{4}) - \neq_-(\frac{\pi}{4})| = r\sqrt{2} \quad (2)$$

$$\Rightarrow 1\sqrt{\frac{r}{2}}a - (-1)\sqrt{\frac{r}{2}}a = 1\sqrt{\frac{r}{2}}a \Rightarrow a = \frac{1}{r}$$

$$\neq(1) = r - 1a$$

$$\neq'(1) = -a$$

$$r - 1a + (-a) = -1 \Rightarrow a = \frac{r}{2} \quad (2)$$

$$\Rightarrow \neq(1) = -\frac{r}{2} \quad \checkmark$$

$$y = \frac{n+a}{v}$$

$$y' = \frac{1}{v}$$

$$y' = \frac{a+r}{(r^{n+1})^r}$$

$$\frac{1}{v} = \frac{a+r}{(r^{n+1})^r} \xrightarrow{n=r} a = 1 \quad \checkmark \quad (2)$$

Arman

$$f(r) = 0 \Rightarrow 1 + 2a - b = 0$$

$$f(r) = 0 \Rightarrow rn^2 + a, n=r \Rightarrow 1r + a = 0 \Rightarrow a = -1r, b = -1r$$

$$b - a = -r$$

$$f'(n) = rn \times n \times \cos n \times \sin^{n-1} n$$

$$\lim_{n \rightarrow 0} \frac{f(n) f'(n)}{(1 - \cos n)^m} = \lim_{n \rightarrow 0} \frac{rn \times n^{n-1}}{\frac{n^m}{r^m}} = r^{\frac{11}{r}}$$

$$n \times r^{m+1} = r^{\frac{11}{r}}$$

$$n-1 = r \Rightarrow n = r, m = \frac{1}{r} \Rightarrow rm + n = 9$$

$$f'(x) = \frac{1}{(f^{-1})'(f(x))}$$

$$f'(x) = \frac{(\frac{1}{\sqrt{x}})(\sqrt{x}-1) - (\sqrt{x}+1)(\frac{1}{\sqrt{x}})}{(\sqrt{x}-1)^2}$$

$$f(x) = x \Rightarrow x = 9$$

$$\Rightarrow f'(9) = -\frac{1}{1r} \Rightarrow (f^{-1})'(r) = -1r$$

$$f(-1) = -1a + 1$$

$$\frac{1 - (-1a + 1)}{1} = -1 \Rightarrow a = \frac{9}{f}$$

$$f(0) = 1 \quad f'(x) = r(x)(a+1)'(a+1) + a(a+1)' \xrightarrow{x=\frac{1}{r}} r(r+1)(1+r)'(\frac{1}{r}+1) + \frac{1}{r}(1+r)' = 1$$

$$\sin \frac{\pi}{r} \cos \frac{\pi}{r} - \sin \frac{\pi}{f} \cos \frac{\pi}{f}$$

$$\frac{\sin \frac{\pi}{r} \cos \frac{\pi}{r} - \sin \frac{\pi}{f} \cos \frac{\pi}{f}}{\sin \frac{\pi}{r} - \cos \frac{\pi}{r} - (\sin \frac{\pi}{f} - \cos \frac{\pi}{f})} = \frac{-1}{1} = -1$$