

آرشیابی از دفتر A تالیف شماره ٢٥

$$\lim_{x \rightarrow 1} \frac{e^x - vx + r}{\Delta n^r - \Lambda x + r} = \frac{e - v + r}{\omega - \Lambda + r} = \frac{0}{0} \rightarrow \frac{(x-1)(e^x - r)}{(x-1)(\omega x - r)} = \frac{e - r}{\omega - r} = \frac{1}{r} \quad (5) \quad 1$$

$$\lim_{x \rightarrow 0} \frac{|rx - 1| - |rx + 1|}{x} = \frac{-(rx - 1) - (rx + 1)}{x} = \frac{-9x}{x} = -9 \quad (5) \quad 2$$

$$\lim_{x \rightarrow e} \frac{x - e}{\sqrt{x} - r} = \frac{0}{0} = \frac{(\sqrt{x} - r)(\sqrt{x} + r)}{(\sqrt{x} - r)} = r + r = e \quad (5) \quad 3$$

$$\lim_{x \rightarrow r} \frac{x - \sqrt{rn}}{rn^r - x - r} = \frac{0}{0} = \frac{x - \sqrt{rn}}{(x - r)(rn + r)} \times \frac{x + \sqrt{rn}}{x + \sqrt{rn}} = \frac{x^2 - rn}{(x - r)(rn + r)(x + \sqrt{rn})} = \frac{r}{rn} = \frac{1}{r} \quad (5) \quad 4$$

$$\lim_{x \rightarrow 1} \frac{1 - \sqrt{x}}{r - \sqrt{\omega - x}} = \frac{0}{0} = \frac{1 - \sqrt{x}}{r - \sqrt{\omega - x}} \times \frac{1 + \sqrt{x}}{1 + \sqrt{x}} \times \frac{r + \sqrt{\omega - x}}{r + \sqrt{\omega - x}} = \frac{(1 - x)(r + \sqrt{\omega - x})}{-(1 - x)(1 + \sqrt{x})} = -r \quad (5) \quad 5$$

$$\lim_{x \rightarrow e} \frac{\sqrt{rx + e} - e}{\sqrt{\omega x + v} - r} \times \frac{r}{r} \times \frac{r}{r} = \frac{r(x - e)(\sqrt{\omega x + v} + r + \sqrt{\omega x + v} + e)}{\omega(x - e)(\sqrt{rx + e} + e)} = \frac{r}{\omega} \quad (5) \quad 6$$

$$\lim_{x \rightarrow 1} \frac{\sqrt{rn + \sqrt{n}} - r}{\sqrt{x} - 1} \times \frac{r}{r} \times \frac{r}{r} = \frac{r(\sqrt{x} - 1)(r\sqrt{x} + e)}{(rx + \sqrt{x} - e)(\sqrt{x} + \sqrt{x} + 1)} = \frac{r}{\Lambda} \quad (5) \quad 7$$

$$\lim_{x \rightarrow \pi} \frac{1 + \cos^2 x}{\sin^2 x} = \frac{(1 + \cos x)(1 - \cos x + \cos^2 x)}{(1 - \cos x)(1 + \cos x)(1 - \cos x)} = \frac{1 - (-1) + 1}{1 - (-1)} = \frac{r}{r} \quad (5) \quad 8$$

$$\lim_{x \rightarrow \frac{\pi}{e}} \frac{1 - \tan x}{\sin x - \cos x} = \frac{0}{0} = \frac{\cos x - \sin x}{\sin x - \cos x} = \frac{(\cos x - \sin x)}{-\cos x (\cos x - \sin x)} = \frac{-r}{\sqrt{r}} \quad (5) \quad 9$$

$$\lim_{x \rightarrow \frac{\pi}{e}} \frac{\tan^2 x - 1}{\cos^2 x} = \frac{0}{0} = \frac{(\tan x - 1)(\tan x + 1)}{(\cos x - \sin x)(\cos x + \sin x)} = \frac{-(\sin x + \cos x)(\cos x - \sin x)}{\cos^2 x (\cos x - \sin x)(\cos x + \sin x)} \quad (5) \quad 10$$

$$= \frac{-1}{\cos^2 x} = \frac{-1}{r}$$