

$$\lim_{\lambda \rightarrow 1} \frac{\lambda^2 - \sqrt{\lambda+1}}{\omega \lambda^2 - \lambda \omega + \omega} = \frac{(\lambda-1)(\lambda^2 - \omega)}{(\lambda-1)(\omega \lambda - \omega)} = \frac{1}{\omega}$$

(۱) (۵)

$$\lim_{\lambda \rightarrow 0} \frac{|\lambda^2 - 1| - |\lambda^2 + 1|}{2}$$

$$\frac{-\lambda^2 + 1 - \lambda^2 - 1}{2} = \frac{-4\lambda}{2} = -4$$

(۲) (۵)

$$\lim_{\alpha \rightarrow \pi} \frac{\alpha - \pi}{\sqrt{\alpha} - \pi} = \frac{(\sqrt{\alpha} - \pi)(\sqrt{\alpha} + \pi)}{(\sqrt{\alpha} - \pi)} = \pi$$

(۳) ۱,۷۵

$$\lim_{\alpha \rightarrow \pi} \frac{\alpha - \sqrt{\pi \alpha}}{\pi \alpha^2 - \alpha - 4} \times \frac{\alpha + \sqrt{\pi \alpha}}{\alpha + \sqrt{\pi \alpha}} = \frac{\alpha^2 - \pi \alpha}{(\pi \alpha^2 - \alpha - 4)\pi} = \frac{\alpha(\alpha - \pi)}{(\alpha - \pi)(\pi \alpha + 4)\pi} = \frac{1}{\pi \alpha}$$

$$\frac{\pi \alpha^2 - \alpha - 4}{-\pi \alpha^2 + \pi \alpha} \times \frac{\alpha - \pi}{\pi \alpha + 4}$$

$$\lim_{\alpha \rightarrow \pi} \frac{1 - \frac{\pi}{\alpha}}{\pi \alpha - 1} = \frac{1}{\pi}$$

(۴) ۰/۵

$$\lim_{\alpha \rightarrow 1} \frac{1 - \sqrt{\alpha}}{\pi - \sqrt{\alpha - \alpha}} \times \frac{1 + \sqrt{\alpha}}{1 + \sqrt{\alpha}} \times \frac{\pi + \sqrt{\alpha - \alpha}}{\pi + \sqrt{\alpha - \alpha}} = \frac{1 - \alpha}{\pi - \alpha + \alpha} \times \frac{\pi}{\pi} = -1$$

(۵) (۵)

$$\lim_{\lambda \rightarrow \pi} \frac{\sqrt{\lambda^2 + \pi} - \pi}{\sqrt{\omega \lambda + \omega} - \pi} \times \frac{\sqrt{\lambda^2 + \pi} + \pi}{\sqrt{\lambda^2 + \pi} + \pi} \times \frac{\sqrt{(\omega \lambda + \omega)^2 + \pi} + \pi}{\sqrt{(\omega \lambda + \omega)^2 + \pi} + \pi} =$$

$$\frac{\lambda^2 + \pi - \pi^2}{\omega \lambda + \omega - \pi \omega} \times \frac{\pi \omega}{\lambda} = \frac{\lambda^2 - \pi^2}{\omega(\lambda - \pi)} \times \frac{\pi \omega}{\lambda} = \frac{\lambda + \pi}{\lambda}$$

(۶) (۵)

