

$$\text{le. } \lim_{x \rightarrow 0} \frac{\sqrt{x+4} - 2}{x} \cdot \frac{\sqrt{x+4} + 2}{\sqrt{x+4} + 2}$$

$$= \lim_{x \rightarrow 0} \frac{x+4 + 2\sqrt{x+4} - 2\sqrt{x+4} - 4}{x(\sqrt{x+4} + 2)}$$

$$= \lim_{x \rightarrow 0} \frac{x}{x(\sqrt{x+4} + 2)}$$

$$= \lim_{x \rightarrow 0} \frac{1}{\sqrt{x+4} + 2}$$

$$= \frac{1}{\sqrt{0+4} + 2}$$

$$= \frac{1}{\sqrt{4} + 2}$$

$$= \frac{1}{2+2}$$

$$= \frac{1}{4}$$

$$\begin{aligned} & \sqrt{5} \sqrt{5} \\ &= \sqrt{25} \\ &= 5 \end{aligned}$$

$$\begin{aligned} & \sqrt{x} \cdot \sqrt{x} \\ &= \sqrt{x^2} \\ &= x \end{aligned}$$

$$\begin{aligned} & \sqrt{x+4} \sqrt{x+4} \\ &= \sqrt{(x+4)^2} \\ &= x+4 \end{aligned}$$