

29. To be proved: $\lim_{x \rightarrow \infty} \frac{1}{\sqrt{x^2 + 1}} = 0$. Proof: Let $\epsilon > 0$ be given. We have

$$\left| \frac{1}{\sqrt{x^2 + 1}} \right| = \frac{1}{\sqrt{x^2 + 1}} < \frac{1}{x} < \epsilon$$

provided $x > R$, where $R = 1/\epsilon$. This completes the proof.