

Evaluating Limits Numerically

Find the limit, if it exists, for each of the following. If it does not exist, explain why.

$$1. \lim_{x \rightarrow -1} \frac{x^2 - 1}{x + 1} =$$

$$2. \lim_{x \rightarrow 1} \frac{x^2 - 2}{x - 1} =$$

$$3. \lim_{x \rightarrow 0} \frac{2^x - 1}{x} =$$

$$4. \lim_{x \rightarrow 2} \frac{\sqrt{5x^2 - 15}}{x^3} =$$

$$5. \lim_{x \rightarrow 0} \frac{\sqrt{x+4} - 2}{x} =$$