

**Exercise 1** A student's attempt to evaluate the limit  $\lim_{x \rightarrow 0} \frac{x^3 + x}{x}$  using limit laws is recorded below. From one line to the next, only one limit law should be utilized. Which of the following options best describes the student's work?

$$\begin{aligned}\lim_{x \rightarrow 0} \frac{x^3 + x}{x} &= \lim_{x \rightarrow 0} \frac{x(x^2 + 1)}{x} \\ &= x^2 + 1\end{aligned}$$

**Multiple Choice:**

- (a) The work is perfect
- (b) The answer is correct, but the student skipped some steps, or made a mistake along the way
- (c) The answer is incorrect ✓

**Feedback(attempt):** It never makes sense for the limiting variable to appear in the answer to a limit.

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