

Exercise 1 A student's attempt to evaluate the limit $\lim_{x \rightarrow 1} \frac{x^3 - 1}{x - 1}$ using limit laws is recorded below. Which of the following options best describes the student's work?

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

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): While the student's answer is correct, certain intermediate steps were bypassed. A complete solution would have included an application of the sum rule and power rule, for instance.