

Vocabulary/Definitions

- Continuity of a function
- Which functions are continuous
- The Intermediate Value Theorem
- Limit
- Right- and left-hand limits
- How a limit may not exist
- What a limit at infinity is

Understand

1. Suppose that $f(x) = \sin(x^2 + 3)$. Find $f(1)$ and $f(2)$. What do these in conjunction with the Intermediate Value Theorem tell you?

2. Use a graph to estimate $\lim_{x \rightarrow 0} \frac{1 - \cos(x)}{x}$.

Random other question: What error is made in the example of continuous functions given?