Julia: What does it mean for a graph to be discontinuous? I don't get it!

Dylan: I think it's like when there's a hole in the graph or something.

James: Actually there are different kinds of discontinuities, but it's hard to visualize so let's take a look!

Altogether: LET'S DIVE IN!

Introduction

Question 1 *A function f is said to be continuous at a point $x = a$ if three conditions are satisfied:*

Select All Correct Answers:

(a) $f(a)$ *is defined* ✓

(b) $f(a) \neq 0$

(c) $\lim_{x \to a} f(x)$ *exists* ✓

(d) $\lim_{x \to a} f(x) = f(a)$ ✓