

## Limits

The concept of limits describes how a function behaves as its input approaches a certain value.

### Example

Find  $\lim_{x \rightarrow 2} x^2$ . Solution:  $\lim_{x \rightarrow 2} x^2 = 4$

**Solution:** Since  $x^2$  is continuous,

$$\lim_{x \rightarrow 2} x^2 = 2^2 = 4.$$

### Key Idea

A limit describes the behavior of a function as it approaches a point. Limits help us understand the behavior of functions near points where they may not be explicitly defined.

### Silly Trick

“Get closer without kissing!” – Think of the limit as approaching, not touching.