## Background

Who is Leonhard Euler? What are some things he is known for? $\qquad$
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$\qquad$

What is his function notation? What does it mean graphically? $\qquad$
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$\qquad$

## Function Basics

What is a function exactly? $\qquad$
$\qquad$


## Domain and Range

## Define domain:

## Define range:

Compared to domain, why is range so much harder to find?

Example: Find the domain and range of $f(x)=\sqrt{x-3}$

Example: Find the domain and range of $h(t)=\frac{t}{t-3}$

Example: Find the domain and range of $m(x)=\frac{3+x^{2}}{4-x^{2}}$

## Continuous vs. Discontinuous

What does it means for a function (and its graphed equation) to be continuous?

## Types of Discontinuities

## Removable <br> Jump <br> Infinite



