

## Understanding Functions and Their Graphs

### Today's Standard

HSF.IF.A1 - Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If  $f$  is a function and  $x$  is an element of its domain, then  $f(x)$  denotes the output of  $f$  corresponding to the input  $x$ . The graph of  $f$  is the graph of the equation  $y = f(x)$ .

### Real-World Applications for this Standard

Predicting population growth; Modeling business profits; Analyzing scientific data; Mapping geographical data; Calculating interest rates

### Today I Learned

Today, we learned about functions in math. A function takes a number and gives back one answer. We also learned how to draw a picture of a function.

### Common Stumbling Blocks

Sometimes kids think a function can give more than one answer for a number. They also mix up the domain and range, which are the input and output numbers.

### Quiz Me

- What is a function?
- What is the domain?
- What is the range?
- What does  $f(x)$  mean?
- How do you draw a function?

### Help Me

A function is like a machine that takes a number and gives back one answer. For example, if you put in 2 and the machine gives back 4, it always gives back 4 for 2. We can use functions to predict things like how much money we'll have if we save a little each month.

