


What is a function?

In this unit, you will learn about an important math concept called a **function** 

Functions appear in everyday life when two quantities are related to each other so that one quantity *depends on* the other.

Here are two examples of functions. 

In the examples you just saw, the height of the sun in the sky and the size of the tree both depend on time.

Each of these examples is a **function** because it meets the condition that one thing depends on another.

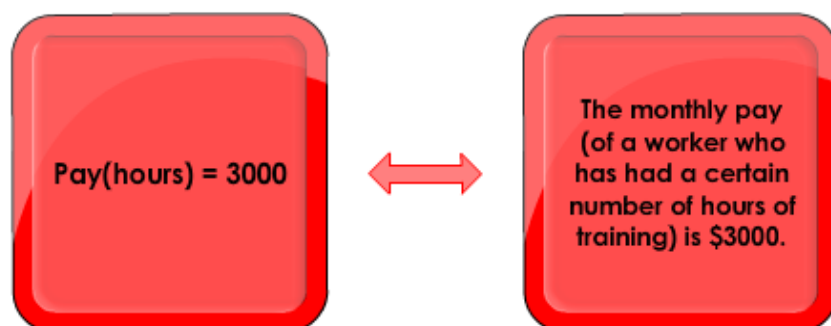
- In English, you would use the phrase ***depends on*** to describe this relationship.
- In algebra, you would replace the phrase *depends on* with the phrase ***is a function of***.

The main trick to writing in **function notation** is to remember which of the two words goes inside the parentheses. Luckily, there is a rule that can help.

The object *being depended on* goes inside the parentheses. This is also the object that follows the phrase *depends on* or *is a function of* in the sentences you saw earlier.

Writing in **function notation** is useful because it provides a quick way to describe relationships.

Not only that, function notation is easy to understand because it uses an approach that is similar to how we might describe a relationship in English.



You might wonder how you should read symbols written in **function notation** out loud.

$P(h)$ means "P, which is a function of h."

However, when you read this out loud you can just say "P of h." 

Functions are used to describe things we have previously called equations such as:

$$y = 2x + 5$$

Now, we use the same equation but will represent it as a function of x.

$$f(x) = 2x + 5 \text{ is the same as } y = 2x + 5$$