

Variables:

A variable is a letter that represents a number and the value of this number is either:

-Unknown

-Varying

Example for a case of a variable representing an unknown number:

$$x + 5 = 7$$

What this equation means is stating is something plus 5 is equal to 7. Immediately, we do not know what x is; it is an unknown as far as we can tell.

Example for a case of a variable representing a varying number:

Let's say you're working as a waiter/waitress, and you make \$80 a day. As a waiter/waitress, you also receive tips, so it's more than likely that you will make more than just \$80 a day. The actual amount of money you will make will be:

$\$80 + t$, where t represents the money you are making from tips

Because the amount of money you will obtain from tips varies, we cannot represent it as a solid number such as 5 or 10.

If you have obtained \$20 on tips on Monday, then you have made \$100 (80 base + 20 in tips) for the day; however, on Tuesday, if you have obtained \$40 in tips, then you have made \$120 (80 base + 40 in tips) for the day. As we can clearly see, the amount of money obtained in tips varies, which affects our quantity of daily wages.

The most common letter we will use to represent a variable is x , which is incredibly similar to the multiplication sign. Due to how x and the multiplication sign are indistinguishable, we will use $*$ (an asterisk) to represent multiplication.

So instead of writing:

$$3 \times 5 = 15$$

We will now write it as:

$$3 * 5 = 15$$