We defined a **Function as a special relation in which no two ordered pairs have the same first member.**

What that means is that for every member of the domain there is one and only one member of the range.

That means if I give you a rule, like $y = 2x - 3$, when I substitute $x = 4$, I get 5 out. Represented by the ordered pair (4, 5). Now if I substitute 4 in again for x, I have to get 5 out. That makes sense, it's expected so just like the rule for buying cold drinks, this is working, this is functioning as expected, it's a function.

For example: A rule might be going to an amusement park with an entrance fee of $15 and then you pay $2 for each ride. Mathematically, we would write that like this:

$$C = \$15 + \$2r \quad \text{or} \quad C = \$2r + \$15$$

Or using x to represent the number of rides and y to represent the cost, we'd have

$$y = 2x + 15$$

Now, you are thinking, no big deal, isn't that what we would expect?