**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Math 8: What is a Function?**

***Directions: Fill in the blanks below as you watch the video.***

**What is a function?**

* A function is a relation that relates each x value with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ y value.
* In other words, the x's \_\_\_\_\_\_\_\_\_\_\_\_ repeat!

**Example:** {(-2, 1), (0, 3), (3, 6), (-5, -2)}

**Is this relation a function?** \_\_\_\_\_\_\_

Are the relations below functions?

|  |  |
| --- | --- |
| \_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_ |

Vertical Line Test:

* If a vertical line intersects the relation's graph \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ one time, then the relation is NOT a function.
* If a vertical line intersects the relation's graph \_\_\_\_\_\_\_\_ one time, then the relation IS a function.

Are the relations below functions?

|  |  |  |
| --- | --- | --- |
| \_\_\_\_\_\_\_\_\_\_    \_\_\_\_\_\_\_\_\_\_    \_\_\_\_\_\_\_\_\_\_ | You Try 4.  You Try 5.  You Try 6. | \_\_\_\_\_\_\_\_\_\_    \_\_\_\_\_\_\_\_\_\_    \_\_\_\_\_\_\_\_\_\_ |

**What did we learn?**

* A function is a special type of relation that relates each x value with only one y value.
* In other words, the x's DO NOT repeat!
* We can use the Vertical Line Test to determine if a graph is a function.
* If a vertical line intersects the relation's graph more than one time, then the relation is NOT a function.
* If a vertical line intersects the relation's graph only one time, then the relation

IS a function.