Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Math 8: Function Rules

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

What is a Function Rule?

* A function rule is the equation that establishes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between the \_\_\_\_\_\_\_\_\_\_\_\_ (x) and the \_\_\_\_\_\_\_\_\_\_ (y).
* For f(x) = 3x + 1, this rule says that to get y, you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x

by 3 and \_\_\_\_\_\_\_\_ 1.

To solve this mystery, we detectives need to do 3 things:

1. Gather \_\_\_\_\_\_\_\_\_\_\_\_ . Our evidence is our \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
| x |  | Y |
| -4 |  | -5 |
| -2 |  | -3 |
| 0 |  | -1 |
| 2 |  | 1 |
| 4 |  | 3 |

1. Look for clues. What could be happening?

|  |  |
| --- | --- |
| What operations  make numbers  BIGGER? | What operations  make numbers  SMALLER? |

1. Come up with a hypothesis … and try it out!

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | x |  | y | | -4 |  | -5 | | -2 |  | -3 | | 0 |  | -1 | | 2 |  | 1 | | 4 |  | 3 | | Function rule:  y = \_\_\_\_\_\_\_\_\_\_\_\_ |

Let’s try a function machine!

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | input (x) |  | output (y) | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | Function rule:  y = \_\_\_\_\_\_\_\_\_\_\_ |

Let’s try another function macine!

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | input (x) |  | output (y) | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | Function rule:  y = \_\_\_\_\_\_\_\_\_\_\_ |