

1. Sit where you like. I will send around a seating chart for you to fill in your name. PRINT PLEASE. 😊
2. Pick up a Syllabus (orange), CMS grading policy () and an Signature Sheet/Interest Survey (green).
3. Take the card stock I gave you and fold it length wise and write your preferred name big enough so I read it from the front of the room
4. Begin reading the Syllabus and fill out the interest survey.

Math III Honors
Mrs. S. Davis

Are you
in the right place?

Get out your cell phones.

It's not a trick, I promise. 😊

Course Syllabus (**ask me about the changes**)

[1st Period](#)

[3rd Period](#)

[4th Period](#)

Signature Page

[Or "Let's talk about cell phones."](#)

My Website

<http://susanwalkerdavis.weebly.com/>

I am a floating teacher.

It doesn't matter if you get to the class room before I do. There will be a teacher here. You still need to be working on your warm-up when class starts.

Food

Nope. You don't want to see me chasing a mouse or bug out of the room and I don't want to hear you screaming! If you have a medical reason for access to food, have your parent/guardian e-mail me.

Drinks

Yep. BUT only bottles with a screw top or non-disposable cups with a lid. NO fast food drinks.

Passing in papers

Passing out papers

Moving Desks for group work

Moving Desks for testing

Restroom?

1. *You may not leave the classroom during the first or last 15 minutes of the class period.*
2. *Only one person may be out of the classroom at anytime.*
3. *Take the pass with you.*
4. *Do not interrupt class to ask if you can go to the bathroom. Use the bathroom signal and wait for a nod from me. Then quietly grab the pass and go.*

Any violation of the above may result in cancellation of Restroom privileges for the entire class for one week or longer.

- **Signature page and survey (by Friday)**
- **Sign in to the Pearson website and make sure you can access the Algebra and Geometry text books.**
- **Take the Interest Survey on my website.**

Questions



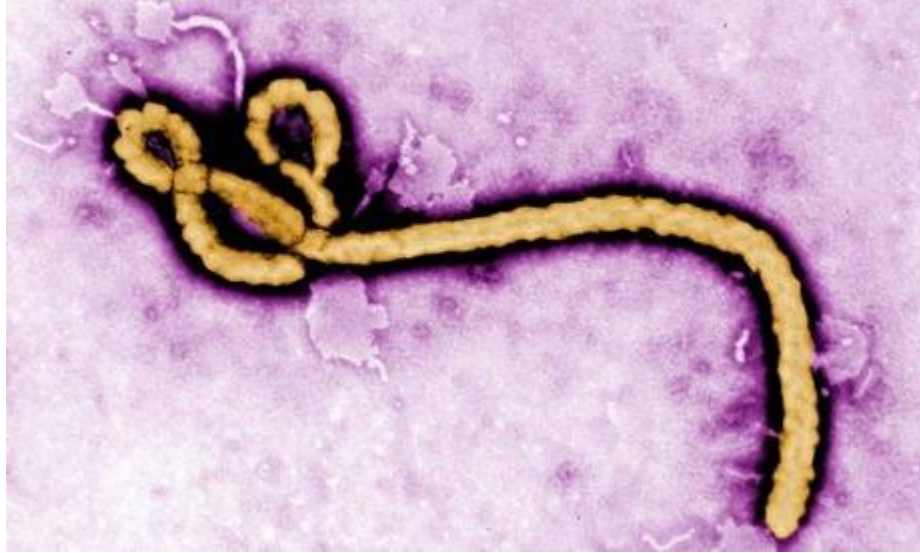
Remember functions?

Define a function relationship

Use data and graphs to determine if the relation is a function

Use function notation and evaluation functions at specific values

Any idea what this is?

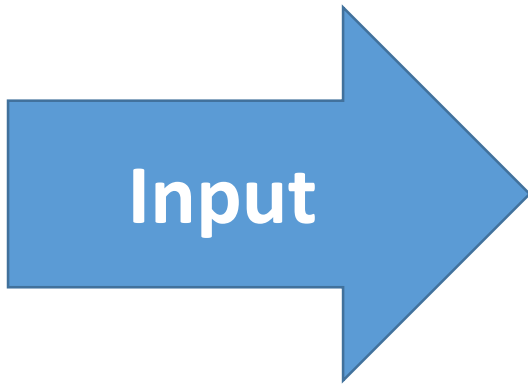


What's the big deal?

The Ebola virus has been all over the news for many weeks.

The CDC will use functions to predict the spread rate of this deadly virus.

Why is that useful?



Fabric

Elapsed
Time

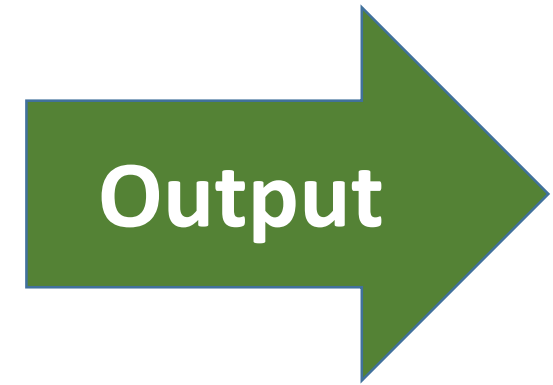
x



Sewing Machine

Population
Model

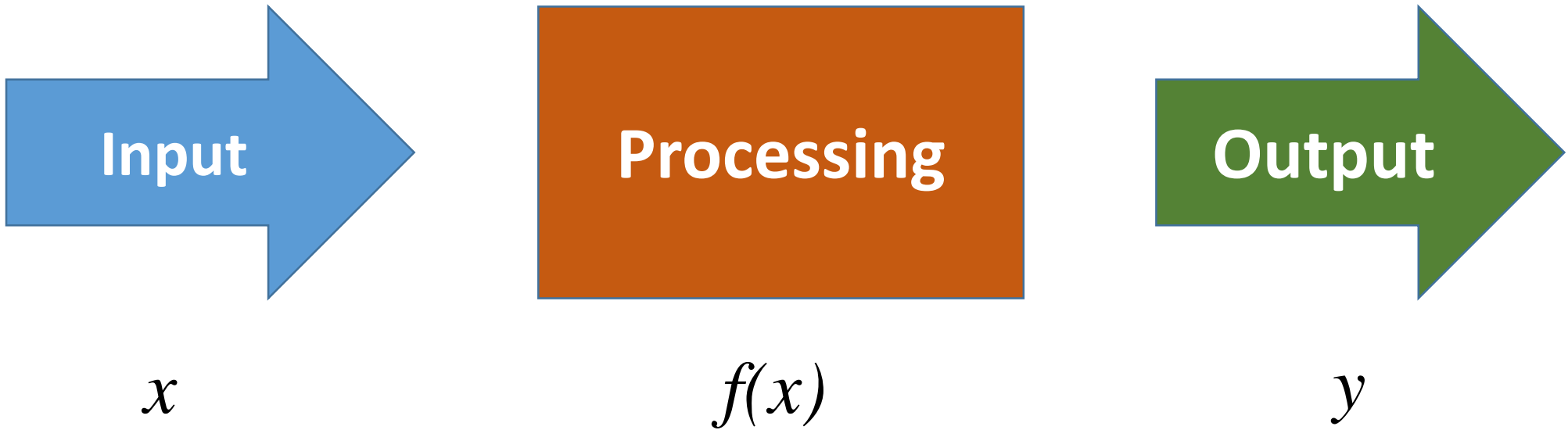
$f(x)$



Jeans

Predicted
Cases of Ebola

y



Where is the dependent variable?

Where is the independent variable?

A trip down memory lane...

A **FUNCTION** is a relation in which each **input value** corresponds with exactly one **output value**.

Another way to say this...

A **FUNCTION** is a relation in which each **x value** corresponds with exactly one **y value**.

Yet another way to say this...

A **FUNCTION** is a relation in which each element of the **domain** corresponds with exactly one element of the **range**.

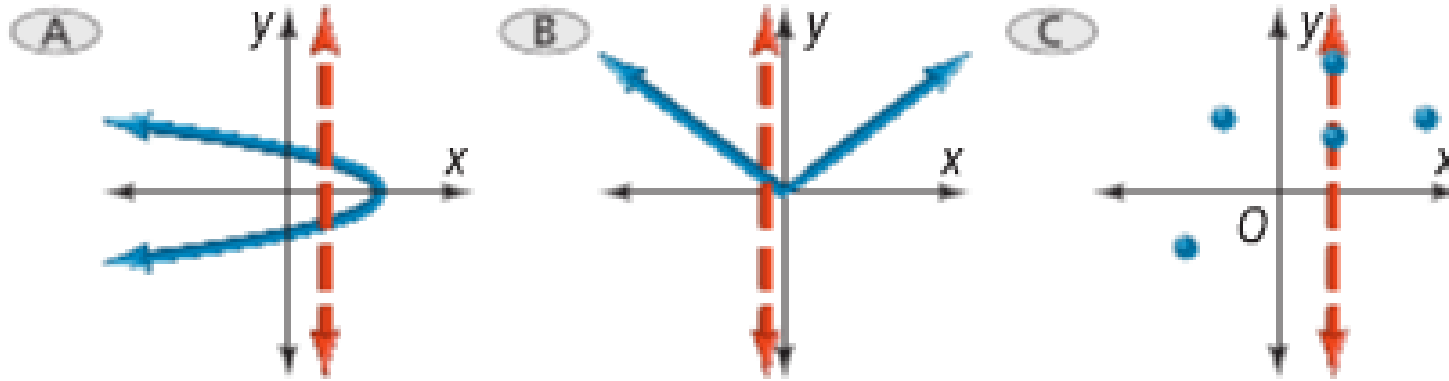
A ***FUNCTION*** is a relation in which each element of the **domain** corresponds with exactly one element of the **range**.

So why is this characteristic so important when functions are used to model real life situations?

What would it mean if we were trying to predict the number of cases of Ebola infections in some future year?

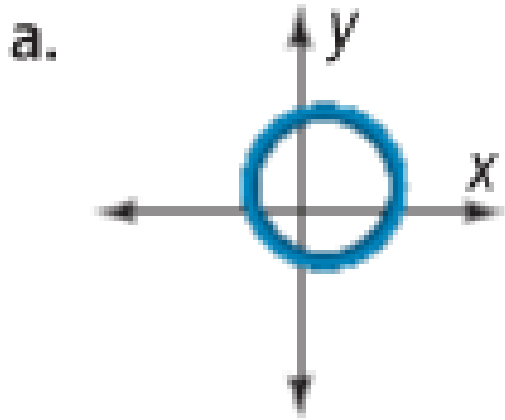
Bad News! Our Model Is Useless!

We have a tool that lets us look at a graph to determine if a function is being represented.

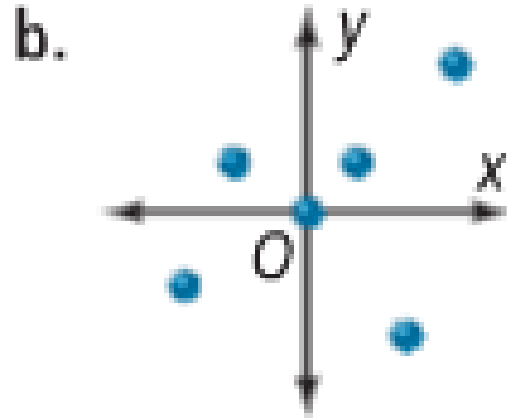


The Vertical Line Test is one way to determine whether a relation is a function. If any vertical line intersects the graph of a relation in more than one point, the relation is not a function.

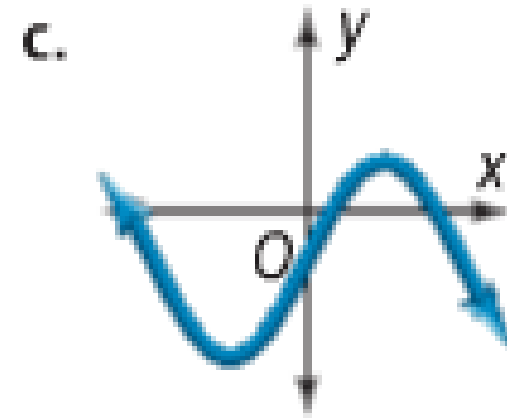
Which of the following graphs represent a function?



X



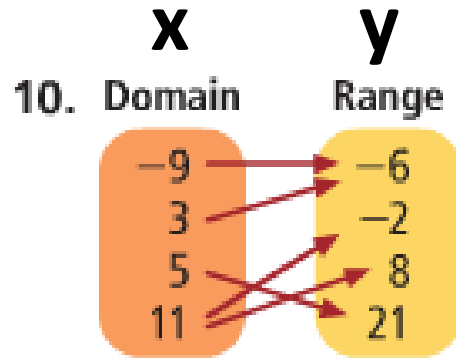
YES



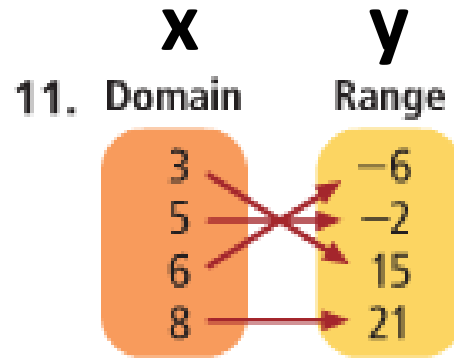
YES

We can also determine if a set of data represents a function by looking at a table of values.

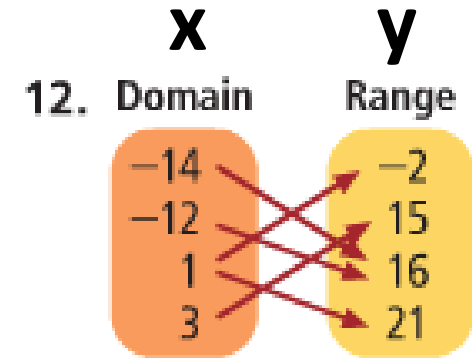
Which of the following represents a function? Why?



no



YES



no

We can also determine if a set of data represents a function by looking at a set of coordinate points.

Does this set of points represent a function? Why?

$\{(3, -9), (11, 21), (121, 34), (34, 1), (23, 45)\}$

YES, ALL X VALUES ARE UNIQUE.

THIS MEANS THAT EACH X VALUE

CAN PRODUCE ONLY 1 Y VALUE.

Evaluate each function for the given value of x , and write the input and output $f(x)$ as an ordered pair.

$$f(x) = -9x - 2 \text{ for } x = 7$$

$$f(7) = -9(7) - 2 = -65$$

Ordered pair: (7,-65)

$$f(x) = -\frac{12x}{5} \text{ for } x = -1$$

$$f(-1) = \frac{12}{5}$$

Ordered pair: $(-1, \frac{12}{5})$

Evaluate each function for the given value of x , and write the input and output $f(x)$ as an ordered pair.

$$f(x) = -\frac{2x + 1}{3} \text{ for } x = -5$$

$$f(x) = \frac{2}{9}x - \frac{9}{2} \text{ for } x = 9$$

Did we meet our objectives?

Can you...

- 1. Define a function relationship?**
- 2. Use data and graphs to determine if the relation is a function?**
- 3. Use function notation and evaluation functions at specific values?**