Bell Ringer - Solve the equation and the inequality.

1. $13(2x - 5) = -39$

2. $5(7 - x) \geq -20$

Bell Ringer - Solve the equation and the inequality.

1. $13(2x - 5) = -39$

$\frac{13}{13}$ $\frac{-39}{13}$

$2x - 5 = -3$

$+5 \quad +5$

$2x = 2$

$x = 1$

$26x - 65 = -39$

$+65 \quad +65$

$26x = 26$

$x = 1$

2. $5(7 - x) \geq -20$

$35 - 5x \geq -20$

$-35 \quad -35$

$\frac{-5x}{-5} \geq \frac{-55}{-5}$

$x \leq 11$

Chapter 9-1 Notes - Functions (Equations with Two Variables)

Vocabulary

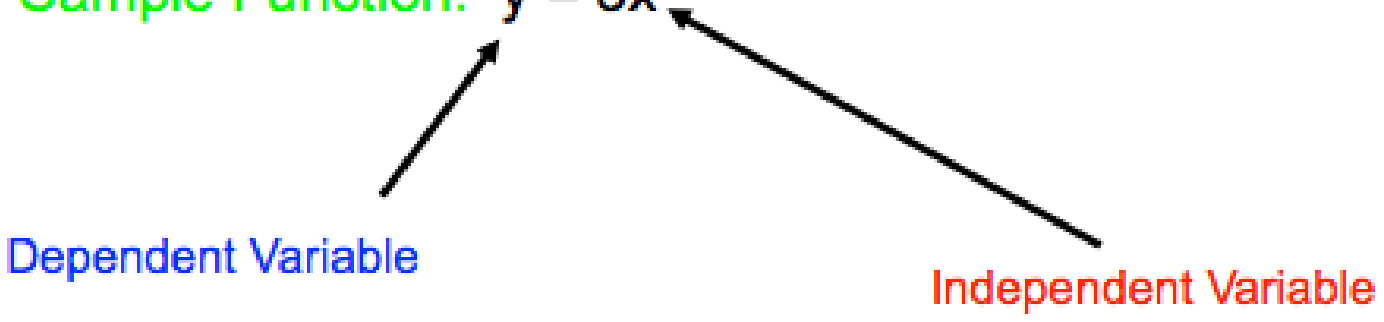
Relation: A pairing of numbers in one set with numbers in another set.
Think ordered pair (x , y)

Function: a relation where each input (x) has **exactly** one output (y).

Independent Variable = x = domain = input
* these values are chosen and do not depend on any other variable.

Dependent Variable = y = range = output
* these values depend on the value of independent variable

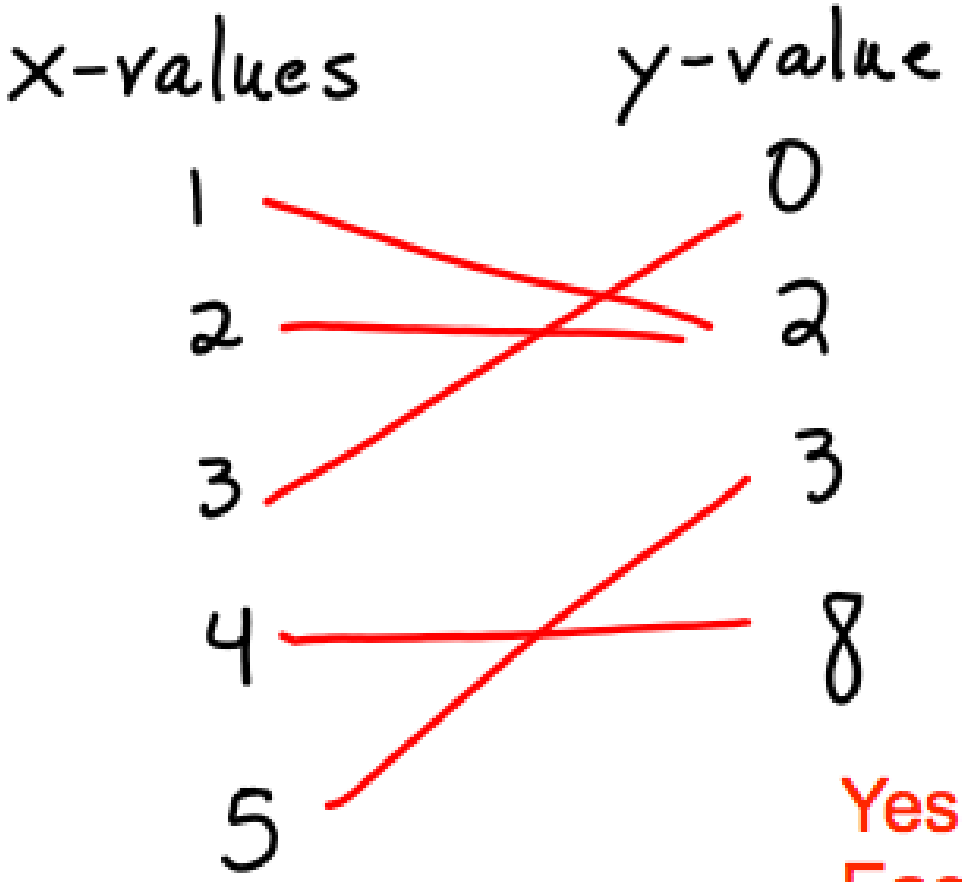
Sample Function: $y = 3x$



Determining if data or a graph represents a FUNCTION.

Method One: Each "x" value has only one "y" value. Use a function map.

1. Does this data represent a function, yes or no: (1,2), (2,2), (3,0), (4,8), and (5,3)



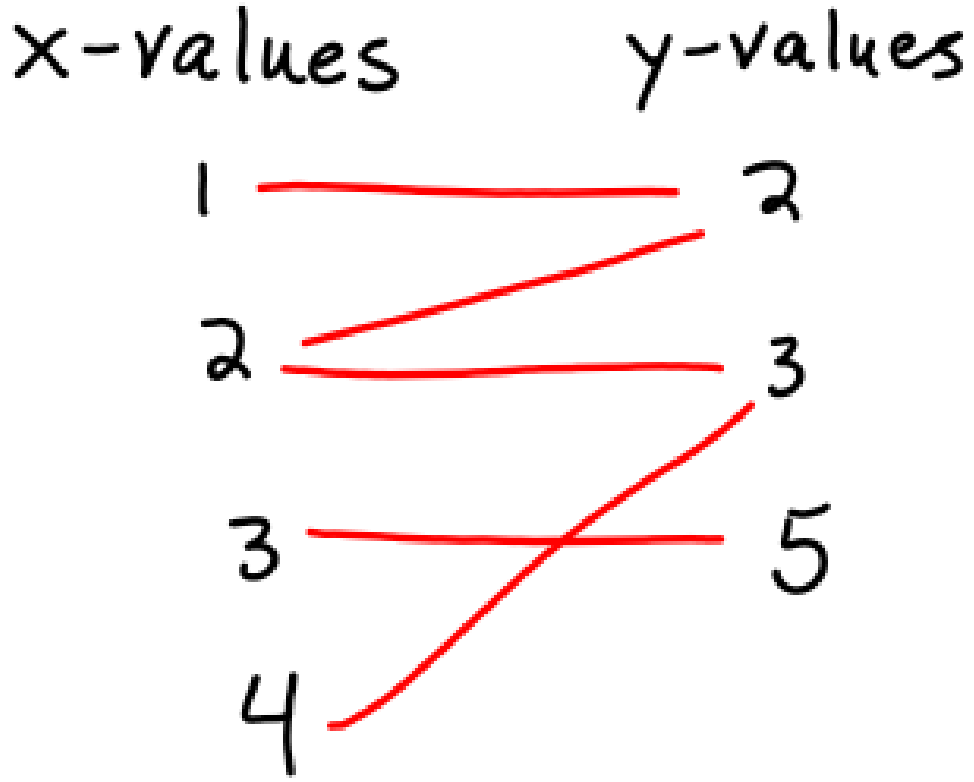
List the x values in order.
List the y values in order.
Connect, then analyze.

Yes, this is a function.
Each x value has only one y value.

Determining if data or a graph represents a FUNCTION.

Method One: Each "x" value has only one "y" value. Use a function map.

2. Does this data represent a function, yes or no: (1,2), (2,2), (2,3), (3,5), and (4,3)

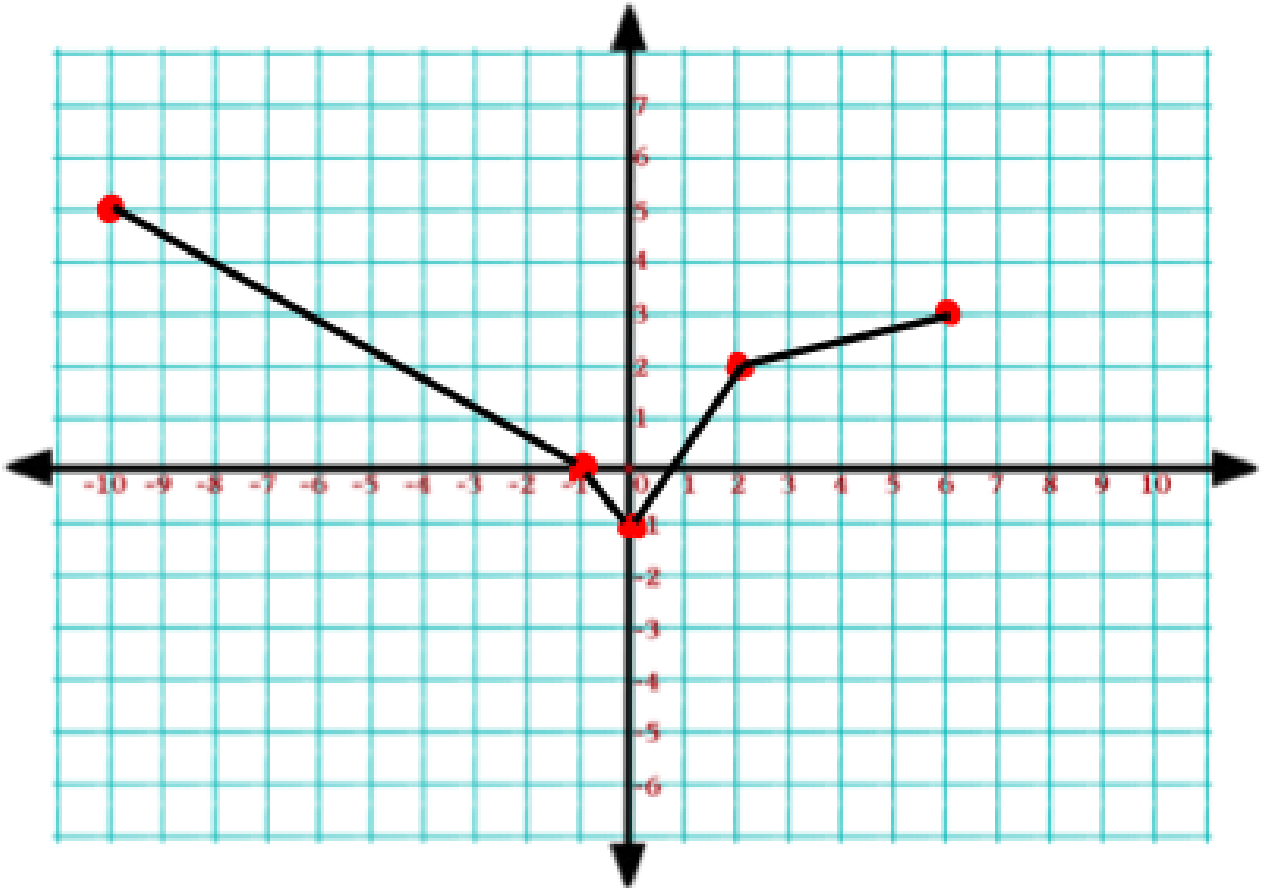


Not a function. The x value of 2 has two different outputs.

Determining if data or a graph represents a FUNCTION.

Method 2: Passes the Vertical Line Test. Any vertical line drawn on a graph passes through only one point.

3. Does this data represent a function, yes or no: (-10,5), (2,2), (-1,0), (0,1) and (6,3). Determine by graphing the points.

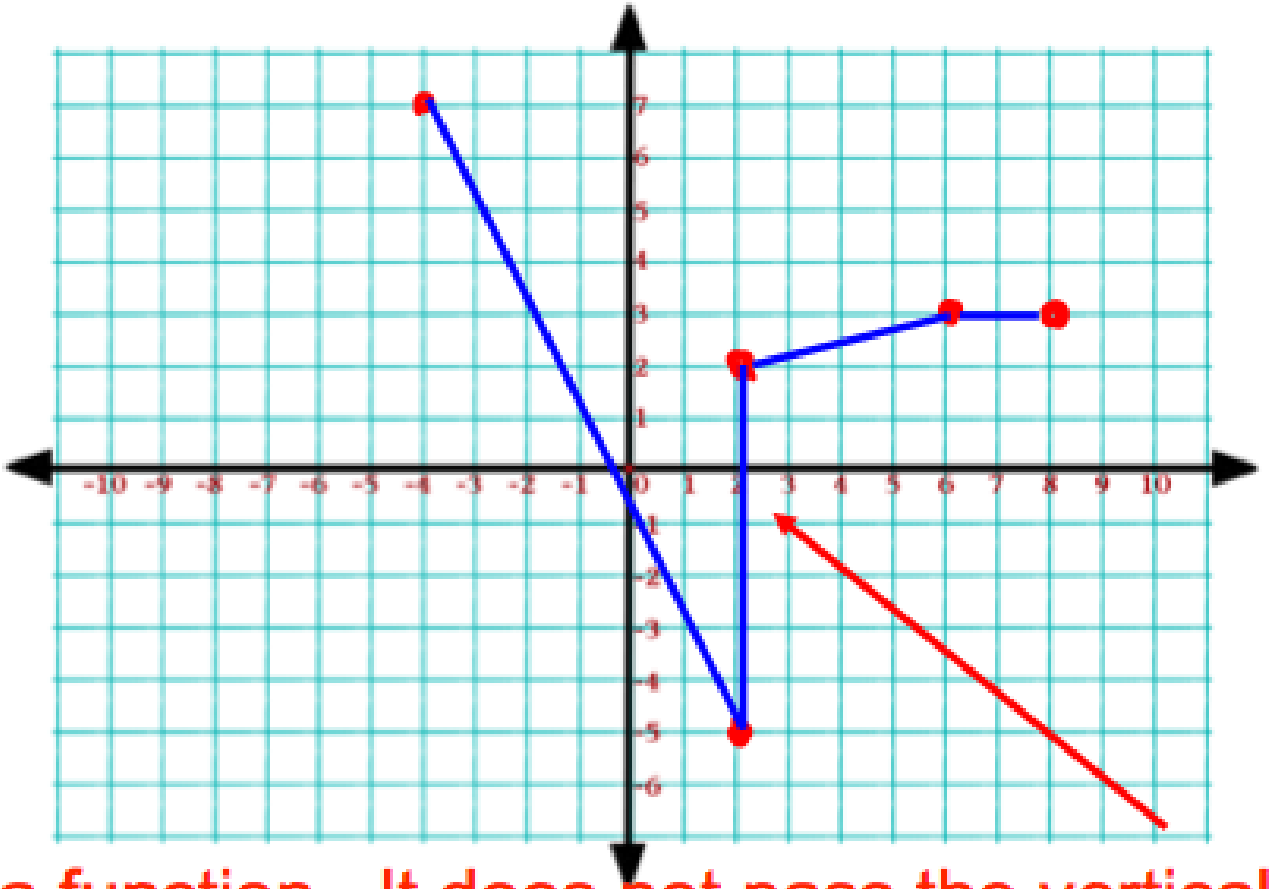


Yes, this is a function. It passes the vertical line test.

Determining if data or a graph represents a FUNCTION.

Method 2: Passes the Vertical Line Test. Any vertical line drawn on a graph passes through only one point.

4. Does this data represent a function, yes or no: (8,3), (2,2), (-4,7), (2, -5) and (6, 3). Determine by graphing the points.



No, this isn't a function. It does not pass the vertical line test.