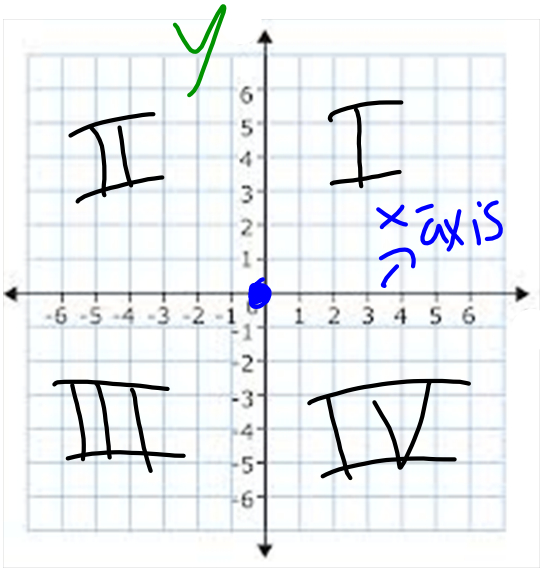
Do Now:

Draw and Identify:

1) x-axis
2) y-axis
3) Origin (what are the coordinates?)
4) The Four Quadrants



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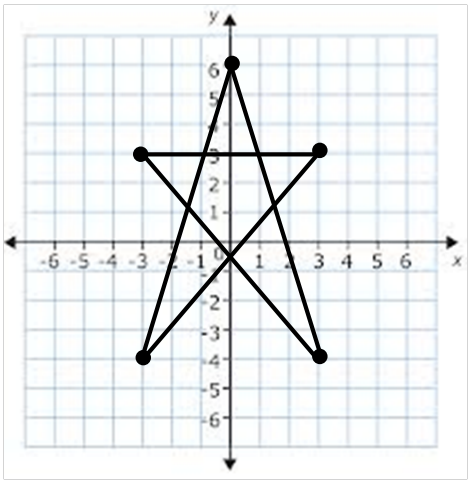
Homework Answers

Matching:

1) y-axis
2) Origin
3) Quadrants
4) x-axis
5) Ordered Pair



Graphing:

1) IV
2) II
3) I
4) III
5) On y-axis

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Function Notation

Equations can be written in a form called function notation.
We use this as a quick way to evaluate functions for a given input.

Example: $y = 2x - 8$ ⟹ $f(x) = 2x - 8$

This is read as f of x = 2x - 8

TEI Q2

Functions

$y =$

x	0	1	2	3	4
f(x)	-2	0	2	4	6

Domain: set of all the first elements of the ordered pairs (x), the "input"

Domain = {0, 1, 2, 3, 4}

Range: set of all the second elements of the ordered pairs (f(x)), the "output"

Range = {-2, 0, 2, 4, 6}

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Relation: a set of ordered pairs (x, y)

EX: {(1,2), (2,3), (3,4), (4,5)}

Function: a relation where every element of the domain is paired with one and only one element of the range

Each *input* has EXACTLY one *output*

If the elements of the relation have repeated "x" values, it is NOT a function

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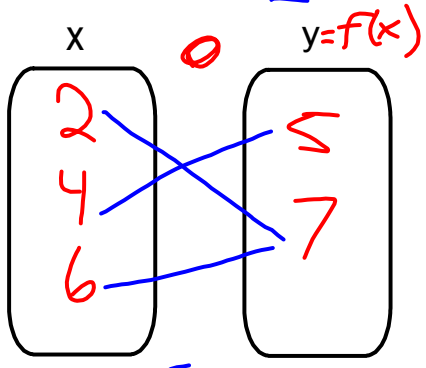
Mapping Diagram

{(2,7), (4,5), (6,7)}

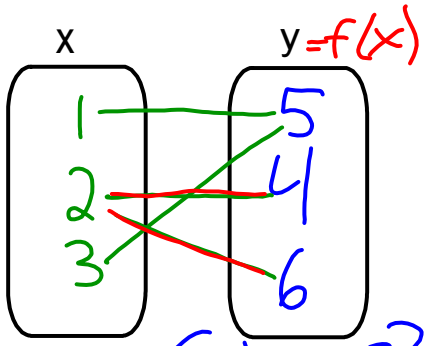


Domain: {2,4,6}

Range: {7,5}

Function!

{(1,5), (2,4), (2,6), (3,5)}



Domain: {1,2,3}

Range: {4,5,6}

Not a function!

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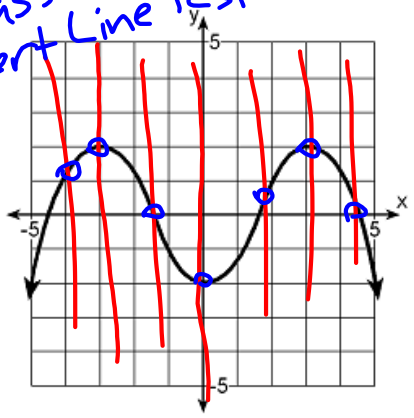
Vertical Line Test: If a vertical line passes through the graph MORE THAN ONCE, then the relation is NOT a function.

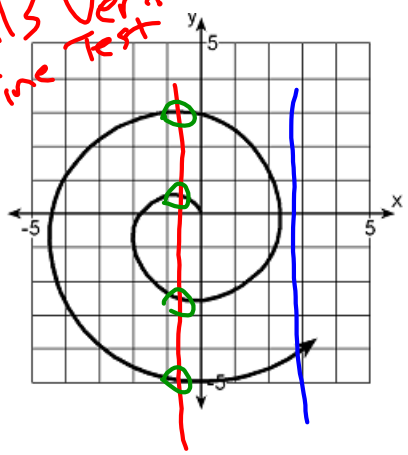
Function

Passes Vert Line Test



Not a Function

Fails Vert Line Test



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To Recap:

What is the Domain?

Set of all the x-values in the ordered pair or in Relation

What is the Range?

Set of all the y-values in the ordered pair or in Relation

What are the 2 methods we learned to identify a function?

Mapping Diagram and Vertical Line Test

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