



Math 8

Unit 4 Functions

Volume 1 Issue 4

References

Glencoe/McGraw-Hill
Georgia Math 7 Plus
Volume 2, Chapter
10 Lessons 1-2

Glencoe/McGraw-Hill, Georgia Math 8,
Text Online:
connected.mcgraw-hill.com

Challenges:

www.figurethis.org

Links:

- <http://www.purplemath.com/modules/fcns.htm>
- <http://www.purplemath.com/modules/fcns2.htm>
- <http://www.shodor.org/interactivate1.0/lessons/fm2.html>
- http://www.mathgodies.com/lessons/vol6/independent_events.html
- <https://mathbitsnotebook.com/Algebra1/Functions/FNFuncBasics.html>
- <https://mathbitsnotebook.com/Algebra1/Functions/FNDomainRange.html>

Dear Parents

Below you will find a list of concepts that your child will use and understand while completing Unit 4: Functions. Also included are references, vocabulary and examples that will help you assist your child at home.

Concepts Students will Use and Understand

- Recognize a relation as a correspondence between varying quantities.
- Recognize a function as a correspondence between inputs and outputs where the output for each input must be unique.
- Distinguish between relations that are functions and those that are not functions.
- Recognize functions in a variety of representations and a variety of contexts.
- Identify relations and functions as linear or nonlinear.
- Translate among verbal, tabular, graphic, and algebraic representations of functions.

Vocabulary

Domain: The set of x-coordinates of the set of points on a graph; the set of x-coordinates of a given set of ordered pairs. The value that is the input in a function or relation.

Function: A rule of matching elements of two sets of numbers in which an input value from the first set has only one output value in the second set.

Graph of a Function: The set of all the points on a coordinate plane whose coordinates makes the rule of function true.

Input: The set of possible values for the first coordinate of a function (domain.)

Output: The set of possible values for the second coordinate of a function (range.)

Range: The y-coordinates of the set of points on a graph. Also, the y-coordinates of a given set of ordered pairs. The range is the output in a function or a relation.

Range of function: The set of all output values or the y-values of a function or a relation is called the range of the function or the relation.

Relation: A rule that gives an output number for every valid input number

Additional Vocabulary Help:

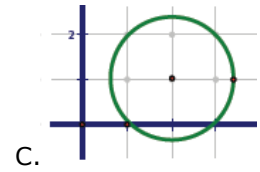
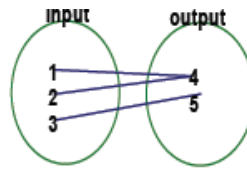
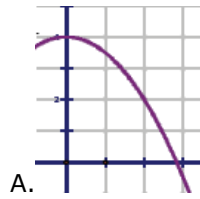
<http://intermath.coe.uga.edu/>



Math 8 Unit 4 Functions

Examples:

- Graph the sequence on a coordinate plane: 2, 5, 8, 11, ... (hint: the domain is the position of the term) Is the graph a function and is it linear or nonlinear?
- What makes a relation a function?
- Identify which of the following are functions:



D. $y=3x+5$

E. {senators, states}

F. {states, senators}

G. $\{(1,2), (2,3), (1,4), (4,1)\}$

Key

- $(1, 2), (2, 5), (3, 8), (4, 11)$; yes, a linear function.
- A relation is a function when every input has one unique output.
- A, B, D, E