

Quantitative Relationships

<i>Vocabulary</i>	<i>Definition</i>	<i>Example</i>
Relation	A set of ordered pairs; can be represented in tables, graphs, or mapping diagrams	$\{(-3, -2), (-1, 1), (7, 3), (9, 5)\}$
Domain	The set of all x -values for the relation	
Range	The set of all y -values for the relation	

Functions are Relations that Follow Rules

Some relations follow specific rules. Given an input, you can reliably predict the output based on the rule.

<u>Definition</u>	<u>Characteristics</u>
Because each input follows a specific rule, a function is a relation in which	<ul style="list-style-type: none"> • A function MAY have • A function MAY NOT have

Function

<u>Example</u>	<u>Non-Example</u>
<p>INPUTS OUTPUTS</p>	<p>INPUTS OUTPUTS</p>

Strategy for Classifying Different Representations without Mapping Diagrams

Representation	Strategy
Graph	Vertical Line Test:
Table	
Ordered Pairs	
Domain & Range	

For each relation card, make (or try to make) a mapping diagram. Glue the card in the correct column.

Relation	Function	Not a Function
Graph		
Table		
Ordered Pairs		
Domain & Range		

Function Notation:

The expression _____ is read as _____ or _____.

It refers to the _____ when _____ is the _____.

Ex. Evaluate the function $f(x) = -3x + 5$ when $x = -2$ and $x = 7$.