

# Function Algebra Key Words

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## Domain and Range of a Function Lesson

closed interval – an interval where the endpoints are included

domain – the set of all first elements of the ordered pairs of a relation or function; the set of all possible inputs of a function

half-open interval – an interval where one of the endpoints is included and one is not included

interval notation – A method of writing a set of numbers where parentheses are used for an exclusive element and a bracket is used for inclusive element; the number on the left is the smallest bound, while the number on the right is the largest bound.

non-ending interval – an interval that starts, ends, or starts and ends at infinity

open interval – an interval where the endpoints are not included

range – the set of all second elements of the ordered pairs of a relation or function; the set of all possible outputs of a function

set builder notation – a method of writing a set of numbers by describing the properties of its members

## Composition of Functions Lesson

composition – a combination of two functions such that the output from the first function becomes the input for the second

## Inverse Functions Lesson

horizontal-line test – a test used to determine whether a function  $f$  is one-to-one; a function  $f$  has an inverse function if and only if the graph of the function is intersected at most once for every horizontal line that may be drawn.

inverse function – the function that results when each ordered pair from the one-to-one function  $f$  is interchanged; denoted  $f^{-1}$

one-to-one function – a function where each element in the range is associated with exactly one element in the domain