Calculus 1.4 CW

What does mean?

is the same thing as

is the independent variable

is the dependent variable

A function is a relationship between two variables such that to each value of the independent variable there corresponds exactly on value of the dependent variable.

What does this mean?

Every has only one coordinate. OR All the ’s are different.

Is this a function?

This is a linear function. There is only one y value for each x.

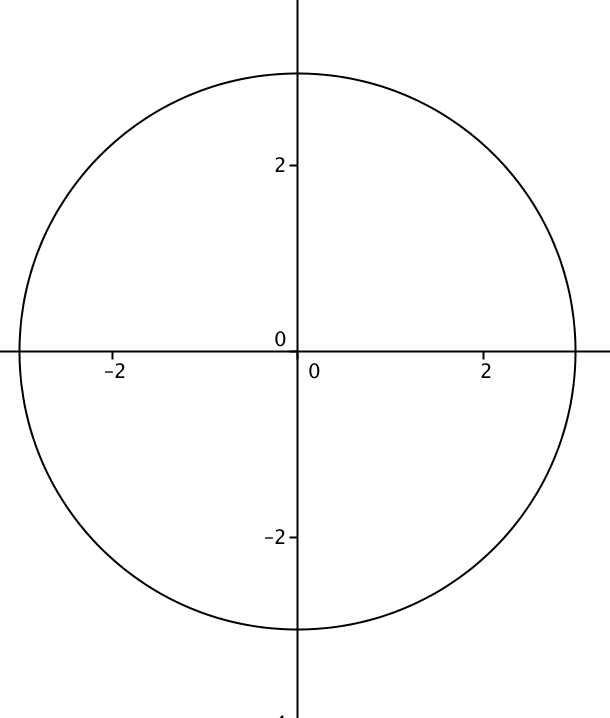
This is not a function as there are two y values for every x.

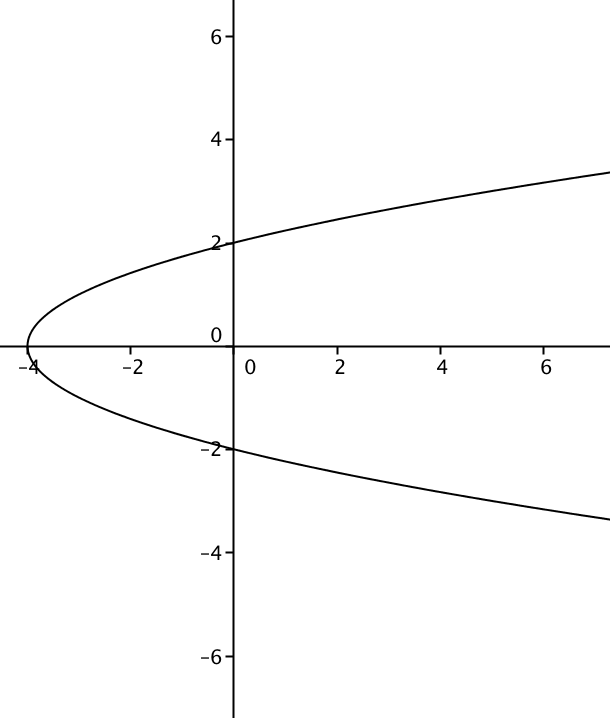
This is a function as there is only one y value for every x.

This is not a function as there are two y values for every x .

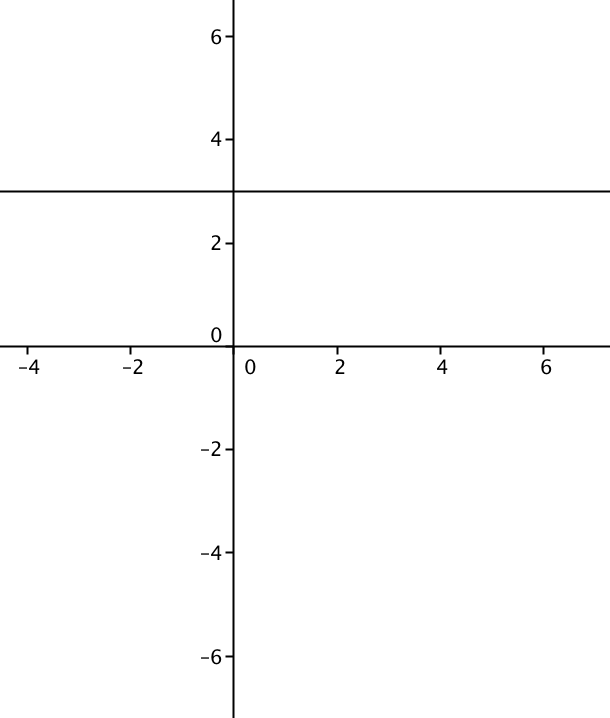
Vertical line test

Use the vertical line test to verify if these are functions or not.

 Not a function.



Not a function.



Domain and Range of the Function

The domain is the x coordinate.

The range is the y coordinate.

What is the domain of each function?

Square roots The function under the square root > 0

Denominators

Square roots in the denominator

Piecewise Functions

There are two pieces to this graph.

One piece is every value to the right of 0.

One piece is every value to the right of 0.

One-to-One Function

A function is one-to-one if it has an inverse. You can check to see if it is one-to-one by using the horizontal line test.

Evaluating a Function:

Is this function one-to-one?

Definition of a Composite Function

Inverse Functions

is the inverse function of if

Find the inverse function.

Steps:

1. Switch the variables.
2. Solve for