WorkBook

CARDINAL NUMBERS

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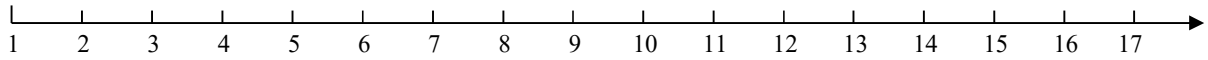
Definitions

There are several sets (groups) of whole numbers. They include

Counting numbers	whole numbers starting at 1.
Cardinal numbers	whole numbers starting at 0.
Integers	all whole numbers (real). This includes negative numbers.

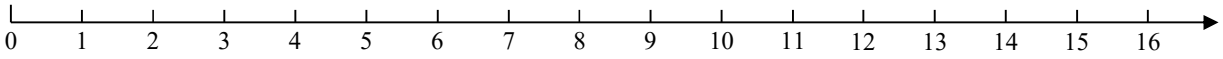
Counting numbers

Counting numbers are whole numbers that, as their name implies, are used for counting. You will always get a counting number as a result of adding or multiplying counting numbers. This is not always true for subtraction or division. A Counting Number Line is drawn below. Notice that the numbers start at 1 and increase infinitely.



Cardinal numbers

Cardinal numbers are whole numbers that, as their name implies, are the main numbers. Cardinal numbers are the Counting numbers and zero.
You will always get a Cardinal number as a result of adding or multiplying Cardinal numbers. This is not always true for subtraction or division. A Cardinal Number Line is drawn below. Notice that the numbers start at 0 and increase infinitely.



Greater Than and Less Than

- While the use of 'bigger' and 'smaller', etc. works with cardinal numbers, it is not compatible with integers.
- Numbers that are to the left of other numbers on a number line are said to be Less Than the other numbers.
- Numbers that are to the right of other numbers on a number line are said to be Greater Than the other numbers.
- The symbols for these relations are; Greater than is > and Less than is <.

Example	Notation
2 is less than 8	$2 < 8$
8 is greater than 2	$8 > 2$
8 is less than 13	$8 < 13$
12 is greater than 7	$12 > 7$

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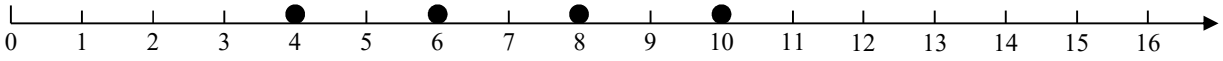
Graphing sets of numbers on a number line.

Sets of numbers can be graphed on a number line. This is a very useful visual representation.

Example. Graph the set of even numbers between 3 and 12.



Example. Graph the set of odd numbers from 3 to 13.