

# Grade 7

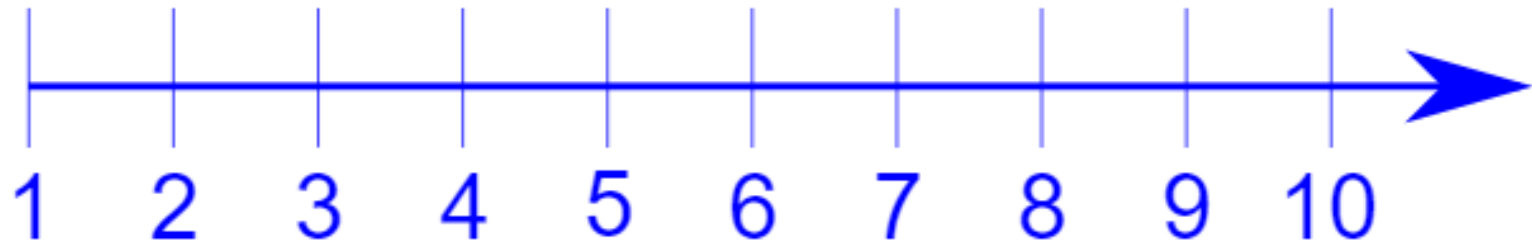
## Unit 1 Vocabulary

### Numbers and Operations

7.2A, 7.3A,  
7.3B

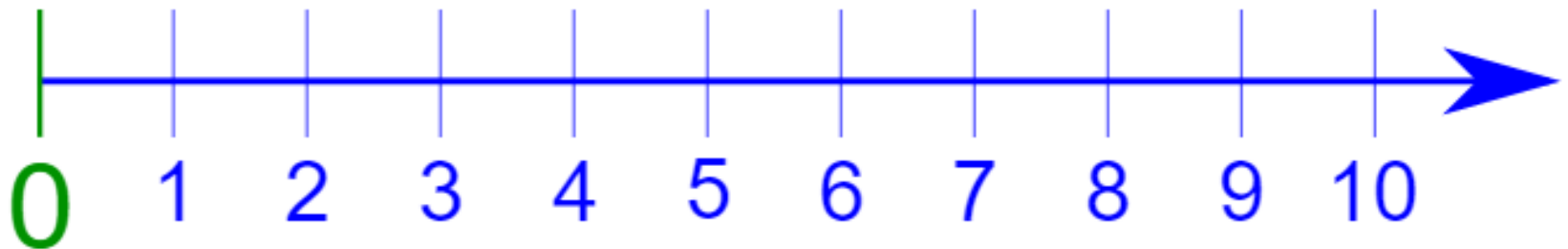
Counting (natural) numbers – The set of positive numbers that begins at one and increases by increments of one each time.  $\{1, 2, 3, \dots, n\}$ .

The numbers you say when you count.



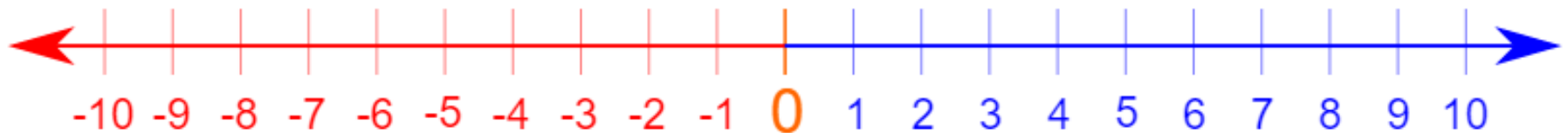
Whole numbers – The set of counting (natural) numbers and zero  $\{0, 1, 2, 3, \dots, n\}$ .

The numbers you say when you count and zero.



Integers – The set of counting (natural numbers), their opposites, and zero  $\{-n, \dots, -3, -2, -1, 0, 1, 2, 3, \dots, n\}$ .

Positive and negative numbers.



Rational numbers – The set of numbers that can be expressed as a fraction  $a/b$ , where  $a$  and  $b$  are integers and  $b \neq 0$ .

Integers, Fractions,  
and Terminating & Repeating Decimals

## **Rational Number**

numbers that can be  
written in the form  $\frac{a}{b}$

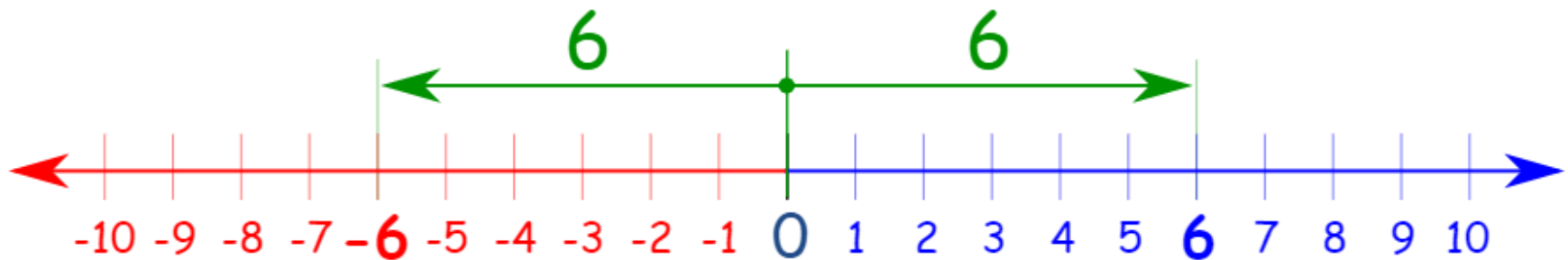
**Examples:**

$\frac{3}{5}$   $-2\frac{1}{6}$   $8.25$

$-3.\overline{6}$   $\sqrt{16}$

Absolute Value – A numbers distance from zero on the number line. It is ALWAYS a positive number.

A numbers distance from zero.



$$|-3| = 3$$

Improper Fraction— A fraction equivalent to or larger than one whole. The numerator is larger than or equal to the denominator.

Fraction with a bigger number on top.

$$\begin{array}{c} \text{numerator} \quad 5 \\ \hline 2 \quad \text{denominator} \end{array}$$

Mixed Number – A whole number and a fraction combined into one "mixed" number.

Number with a fraction

$$3\frac{4}{5}$$



Reciprocal – A number related to another in such a way that when these two numbers are multiplied together their product is 1.

When we FLIP the 2<sup>nd</sup> fraction in a division problem

The diagram illustrates the process of finding the reciprocal of a fraction. It shows the fraction  $\frac{6}{1}$  on the left and the fraction  $\frac{1}{6}$  on the right. Two teal arrows indicate the 'flipping' process: one arrow starts at the numerator '6' of the first fraction and points to the denominator '6' of the second fraction, and another arrow starts at the denominator '1' of the first fraction and points to the numerator '1' of the second fraction.

Square Number — A number which can be represented in the shape of a square. A number that results from multiplying an integer by itself.

Multiplying a number by itself.

Using an exponent of 2.

$2^2$

1	2
3	4

$2 \times 2 = 4$

$3^2$

1	2	3
4	5	6
7	8	9

$3 \times 3 = 9$

$4^2$

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

$4 \times 4 = 16$

Square Root— A value that, when multiplied by itself, gives the number.

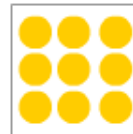
Opposite of squaring a number.

The symbol is  $\sqrt{\quad}$

$$\sqrt{4} = 2$$



$$\sqrt{9} = 3$$



$$\sqrt{16} = 4$$

