# 2.1: Use Integers and Rational Numbers

Goals: \*Compare and order rational numbers \*Classify numbers as whole, integer and rational \*Understand and apply absolute value and opposites

#### **Whole Numbers**:

**Integers**:

#### **Rational Numbers:**

Classify the following numbers using all names that apply:

a) 5	b) 0.6	c) –7	d) $-2\frac{2}{3}$	e) –24
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\*On a number line, where are larger numbers located?

Where are smaller numbers located?

So the biggest number is always...

Compare using: >, <, or = (fill in the missing space)

Ex: 5.2 \_\_\_\_ 5.2003

**Ex:** 0.31 \_\_\_\_\_ 0.301

## Some Helpful Hints to Comparing Numbers:

- 1. Positive numbers are always \_\_\_\_\_\_ than negative numbers
- 2. When comparing two negative numbers, the number with the \_\_\_\_\_\_ absolute value is actually bigger.
- 3. When comparing decimals, positive or negative, you usually need the same number of
- 4. To compare fractions, the \_\_\_\_\_\_ need to be the same.
- 5. To compare fractions to decimals, they either need to both be \_\_\_\_\_\_ or both be

## Change the following decimals to fractions:

a) 0.77 b) 0.64 c) 0.375

## Simplify the following fractions: (do NOT use long division)

0.5	. 26	、 8
a) $\frac{1}{10}$	b) $\frac{1}{1}$	c) $\frac{1}{1}$
10	1.3	1/2

Order the following numbers from least to greatest, then classify each number using all names that apply:



**Ex:** The apparent magnitude of a star is its brightness as observed from Earth. The greater the magnitude, the dimmer the star. Order the stars from brightest to dimmest.

Star	Arcturus	Sirius	Vega
Magnitude	-0.6	-1.47	0.03

**Opposites:** 

# **Absolute Value:**

## For the following numbers, find the opposite of each number and the absolute value of each number.

 $-a \qquad |a|$ Ex: a = -2.5Ex:  $x = \frac{3}{4}$ Ex:  $y = \frac{3}{8}$ Ex: b = -0.6Ex: |-2 - 3|Ex: |-6 - (-2)|Ex: |-5 - 9|