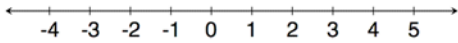
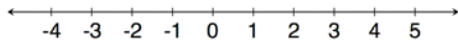
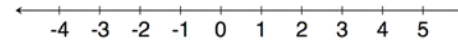
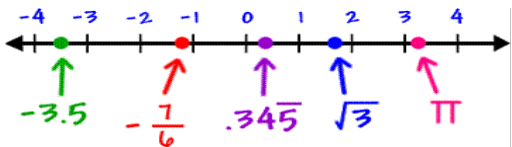


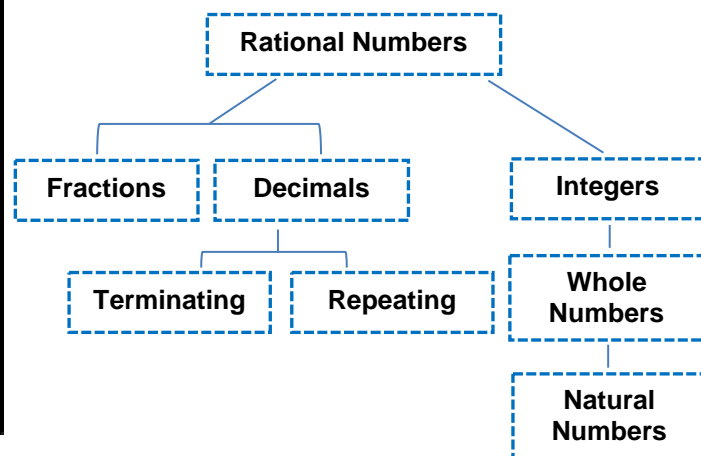
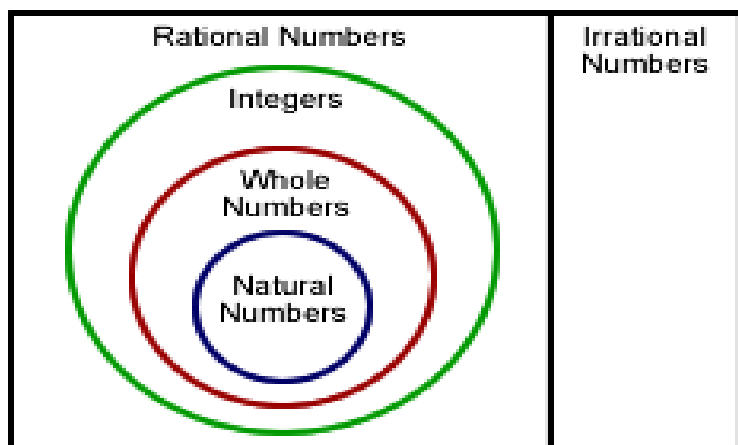
Pre-Algebra

Essential Question: What sets of numbers make up the Real Number System?

Do Now: Count the number of people in this room. _____

Number Set	Definition	Example
Natural Numbers	The set of counting numbers.	
Whole Numbers	The set of counting numbers (natural numbers) and zero.	
Integers	The set of whole numbers and their opposites.	
Rational Numbers	<ul style="list-style-type: none"> Any number that can be expressed as a ratio of two integers $\frac{a}{b}$. Both a and b represent integers and b is not equal to zero ($b \neq 0$). 	
Irrational Numbers	<ul style="list-style-type: none"> All nonrepeating, nonterminating decimals. These numbers <u>cannot</u> be expressed as a <u>fraction of integers</u>. 	
Real Numbers	The combination of rational and irrational numbers.	

Real Numbers



Classify the following numbers as either rational or irrational. Be ready to justify your response.

Rational Numbers	Irrational Numbers

$\frac{1}{5}$	0	127
$\sqrt{16}$	π	19.1212...
$7\frac{2}{9}$	$-\sqrt{64}$	-18.2
$\sqrt{27}$	$0.\bar{4}$	0.353553555...

Write all names that describe each number (Real, Irrational, Rational, Integer, Whole, Natural).

1. -17 _____

2. $-15.\bar{18}$ _____

3. $\sqrt{50}$ _____

4. $\frac{\sqrt{81}}{3}$ _____

5. Identify the set of numbers that best describes the situation. Be ready to justify your response.

a) The number of people wearing glasses in a room.



b) A person's shoe size.



c) The daily high and low temperature as reported by the news.



Today's Take Away...

The Real Number System is made up of _____ and _____ numbers. Sets of real numbers help us describe real-world quantities.

TURN AND TALK



Which sequence of words best describes the set of numbers listed below?

$$\left\{1\frac{5}{6}, -10, 0.\bar{2}, 45\right\}$$

- (1) rational, integer, irrational, natural
- (2) rational, irrational, rational, whole
- (3) rational, whole, rational, natural
- (4) real, integer, rational, whole