

Warm up:

Identify which property is being demonstrated.

1) $9 \times 1 = 9$ *identity*

2) $5 + 12 = 12 + 5$ *commutative*

3) $5(2x + 1) = 10x + 5$ *distributive*

4) $7x + 0 = 7x$ *identity*

5) $(4 + 8) + 3 = 4 + (8 + 3)$ *associative*

HW Solutions

1) 2.13

7) -5.65

2) -14.093

8) -9.3

3) -2.741

9) 3.538

4) -1.79

10) 6.447

5) 1.688

11) -4.101

6) -8.78

$$\textcircled{a} \quad -4.762 + (+8.3)$$

$$\begin{array}{r} 7 \quad 8 \quad 8 \quad 8 \quad 0 \\ 8.\overset{1}{8}\overset{2}{8}\overset{3}{8}\overset{4}{0} \\ -4.762 \\ \hline 3.538 \end{array}$$

$$\textcircled{3.538}$$

$$0 \div 6$$

0

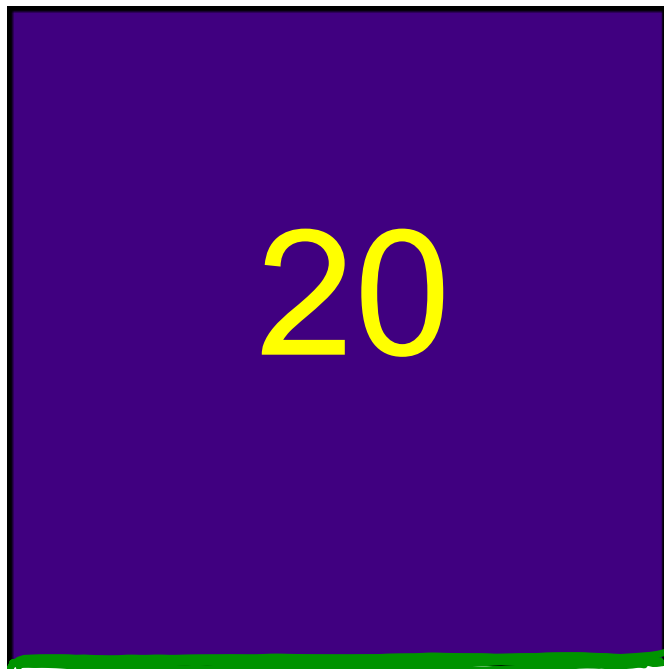
$$6 \div 0$$

undefined

$$\frac{20}{4} = 5$$

$$\frac{20}{0}$$

4



Types of Numbers

Natural Numbers - sometimes called the "counting numbers", $\{1, 2, 3, \dots\}$

Whole Numbers - $\{0, 1, 2, 3, \dots\}$

Integers - whole numbers and their opposites, $\{\dots -3, -2, -1, 0, 1, 2, 3, \dots\}$

Rational Numbers - numbers that can be written in the form a/b where a and b are integers and $b \neq 0$

in other words, numbers that can be written as fractions

$3 = \frac{3}{1}$ $1.2 = 1\frac{2}{10}$ $0.44\bar{4} = \frac{4}{9}$
 $\frac{3}{4}$ $-5\frac{1}{2}$ -7 0 -0.351 $\frac{0.31\bar{3}1}{\sqrt{4}}$ $\frac{31}{99}$

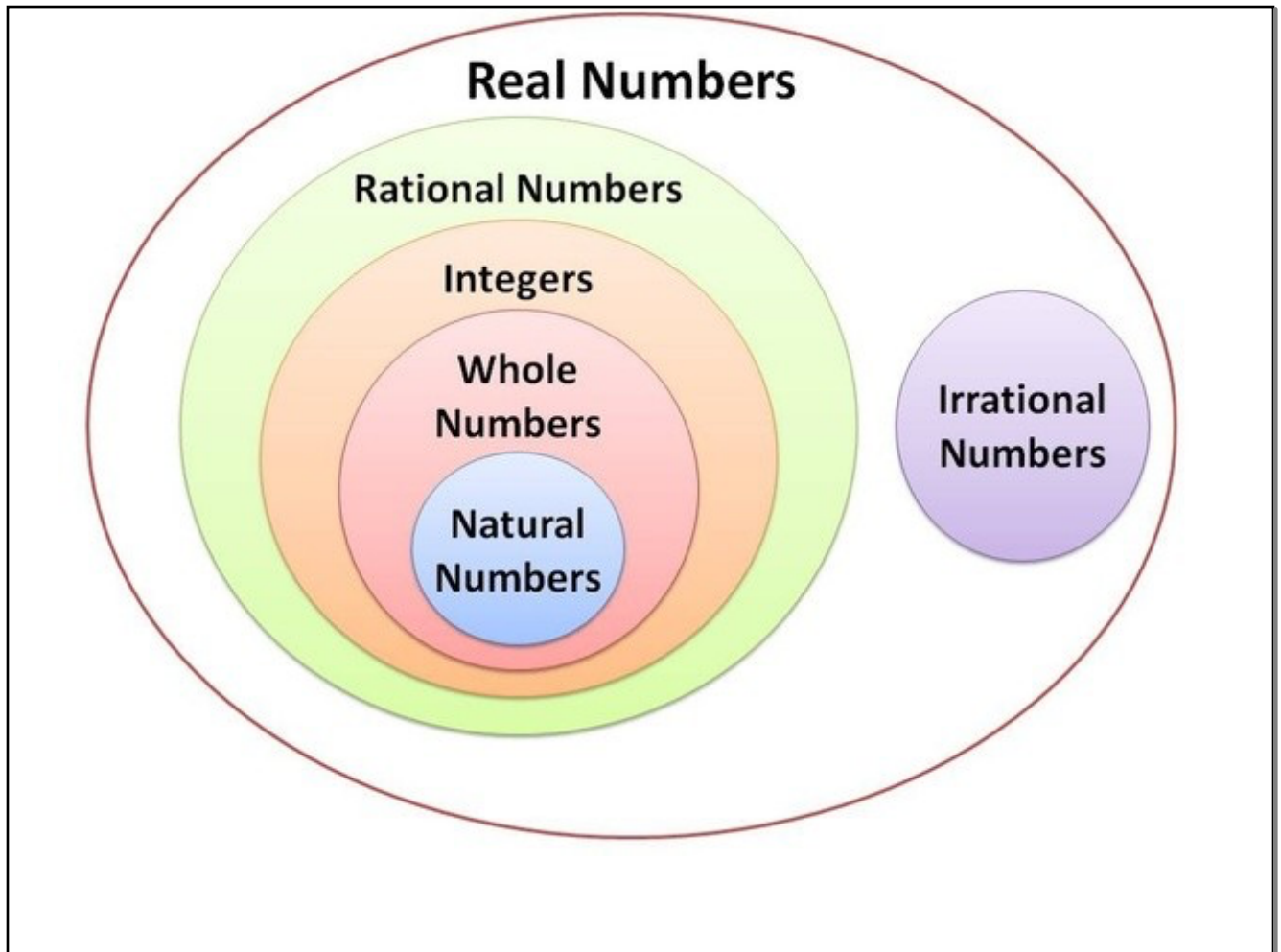
Irrational Numbers - numbers that are not

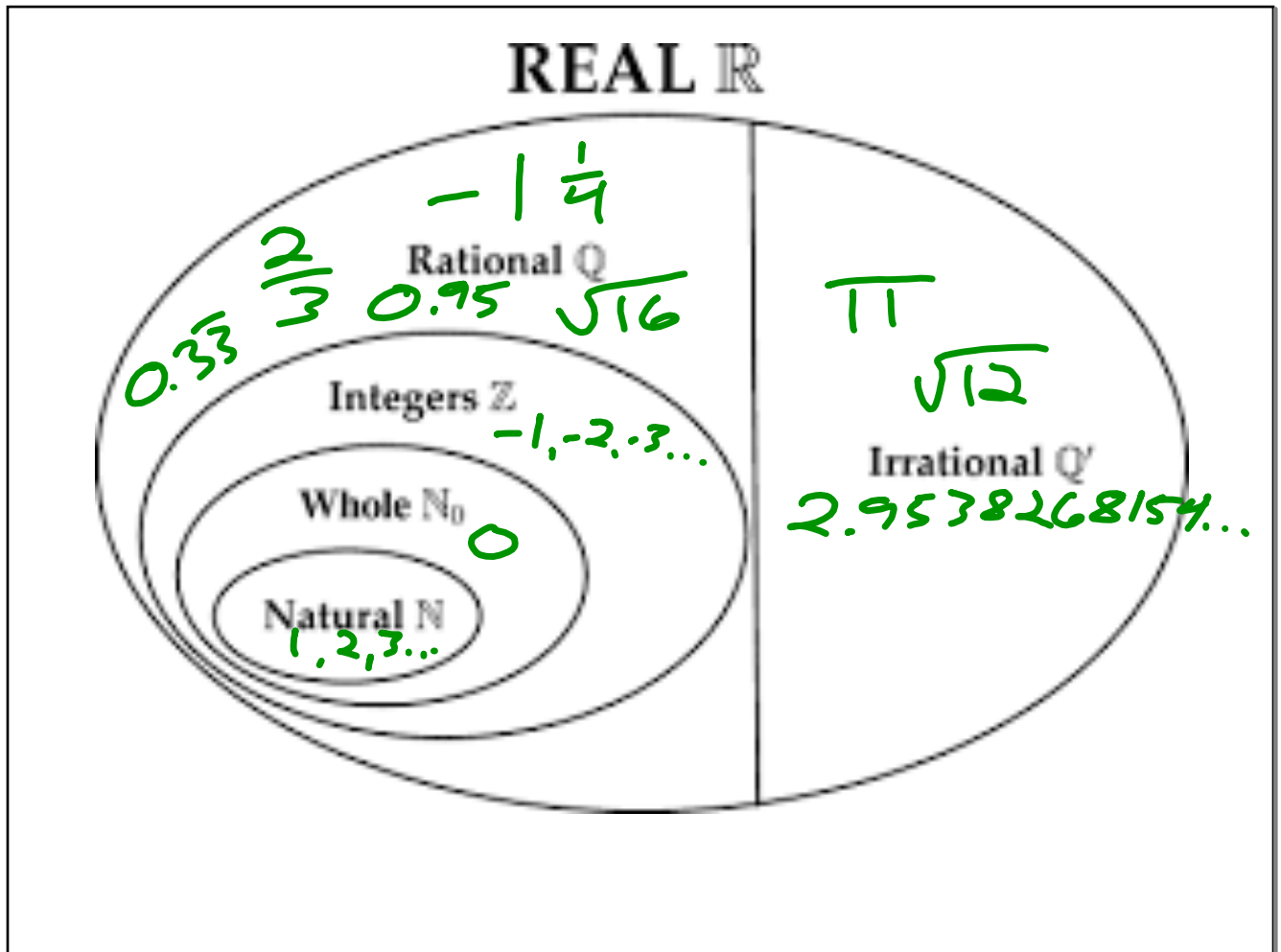
rational π $\sqrt{2}$ $\sqrt{3}$ $\sqrt{5}$ $\sqrt{6}$ $\sqrt{7}$ $\sqrt{8}$

$0.1952773826955321\dots$

Real Numbers - numbers that can represent a distance along a line

rational numbers and irrational numbers together make up the set of real numbers





Example: 7

Natural	✓
Whole	✓
Integer	✓
Rational	✓
Irrational	
Real	✓

-5

Natural	
Whole	
Integer	✓✓
Rational	✓✓
Irrational	
Real	✓✓

-2.658

Natural	
Whole	
Integer	
Rational	✓
Irrational	
Real	✓

4

Natural	✓✓
Whole	✓✓
Integer	✓✓
Rational	✓✓
Irrational	
Real	✓✓

3/5

Natural	
Whole	
Integer	
Rational	✓
Irrational	
Real	✓

-2 1/2

Natural	
Whole	
Integer	
Rational	✓
Irrational	
Real	✓

8.1

Natural	
Whole	
Integer	
Rational	✓
Irrational	
Real	✓

-9

Natural	
Whole	
Integer	✓✓
Rational	✓✓
Irrational	
Real	✓

1/4

Natural	
Whole	
Integer	
Rational	✓
Irrational	
Real	✓

28

Natural	✓✓
Whole	✓✓
Integer	✓✓
Rational	✓✓
Irrational	
Real	✓✓

0

Natural	
Whole	✓✓
Integer	✓✓
Rational	✓✓
Irrational	
Real	✓

9.5

Natural	
Whole	
Integer	
Rational	✓
Irrational	
Real	✓

-Draw the diagram to the right

-Write 4 numbers in each section

-Make sure they are in the most specific category

