

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

④

$$\begin{array}{r} 8.13 + (-6.442) \\ \overset{10}{8}.\overset{12}{13}\overset{10}{0} \\ - 6.442 \\ \hline 1.688 \end{array}$$

1.688

$$\textcircled{9} \quad -4.762 - (-8.3)$$

$$-4.762 + \underline{8.3}$$

$$\begin{array}{r} 7 \quad 1 \quad 2 \quad 9 \quad 1 \\ \cancel{8} \quad \cancel{3} \quad \cancel{0} \quad 0 \\ - 4.762 \\ \hline 3.538 \end{array}$$

3.538

$$\textcircled{1} \quad -6.561 - (-2.46)$$

$$-6.561 + 2.46$$

$$\begin{array}{r} 6.561 \\ - 2.460 \\ \hline 4.101 \end{array}$$

$$\textcircled{-4.101}$$

$$\textcircled{3} \quad \downarrow \\ -7 + 4.259$$

$$\begin{array}{r} \overset{6}{7}.\overset{9}{0}\overset{9}{0} \\ - 4.259 \\ \hline 2.741 \end{array}$$

$$\underline{\underline{-2.741}}$$

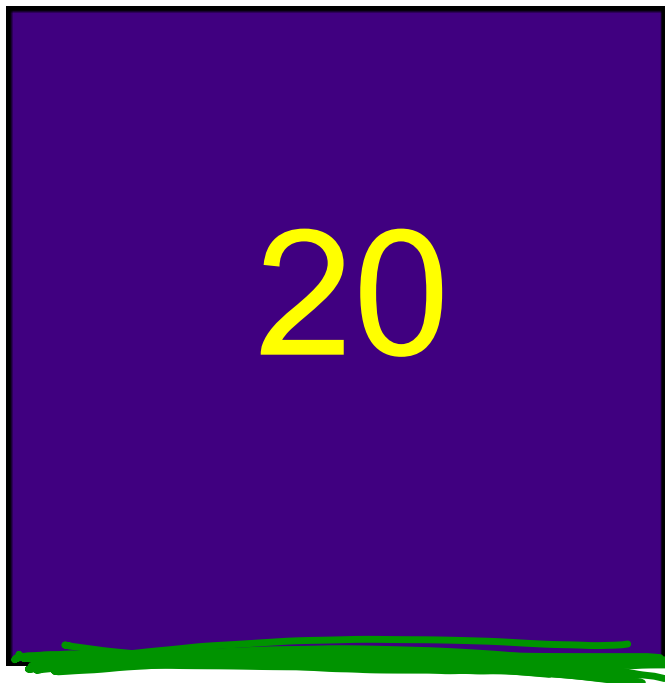
$$0 \div 6 = 0$$

$$6 \div 0$$

undefined

$$\frac{20}{4}$$

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



$5 \div 0$ undefined

$0 \div 7$ 0

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

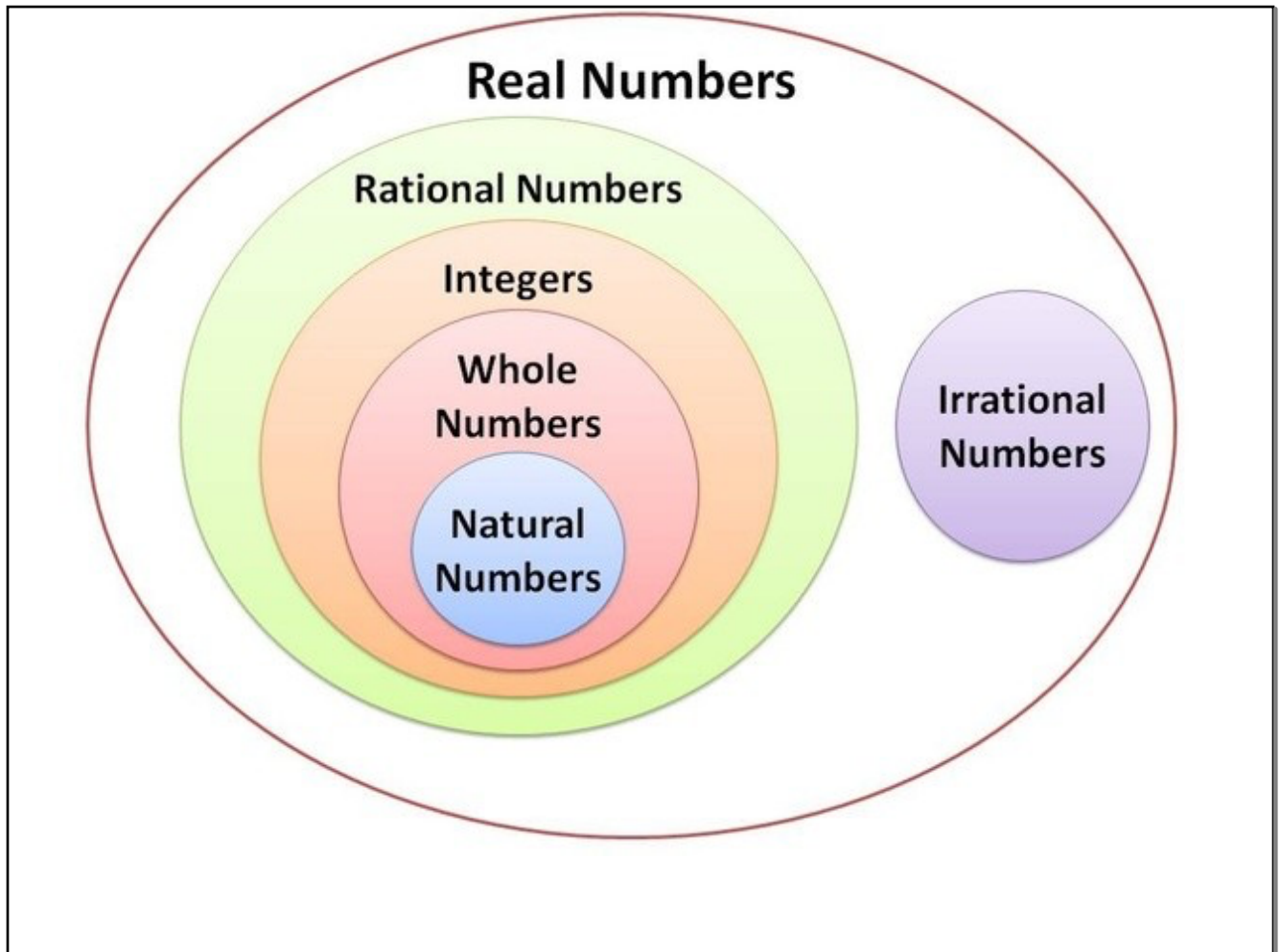
fractions $-3 = -\frac{3}{1}$ $-\frac{6}{8}$ 2.591 $\sqrt{4}$ $\sqrt{25}$
 $5 = \frac{5}{1}$ $0 = \frac{0}{1}$ $\frac{2}{3}$ 0.7 0.5959

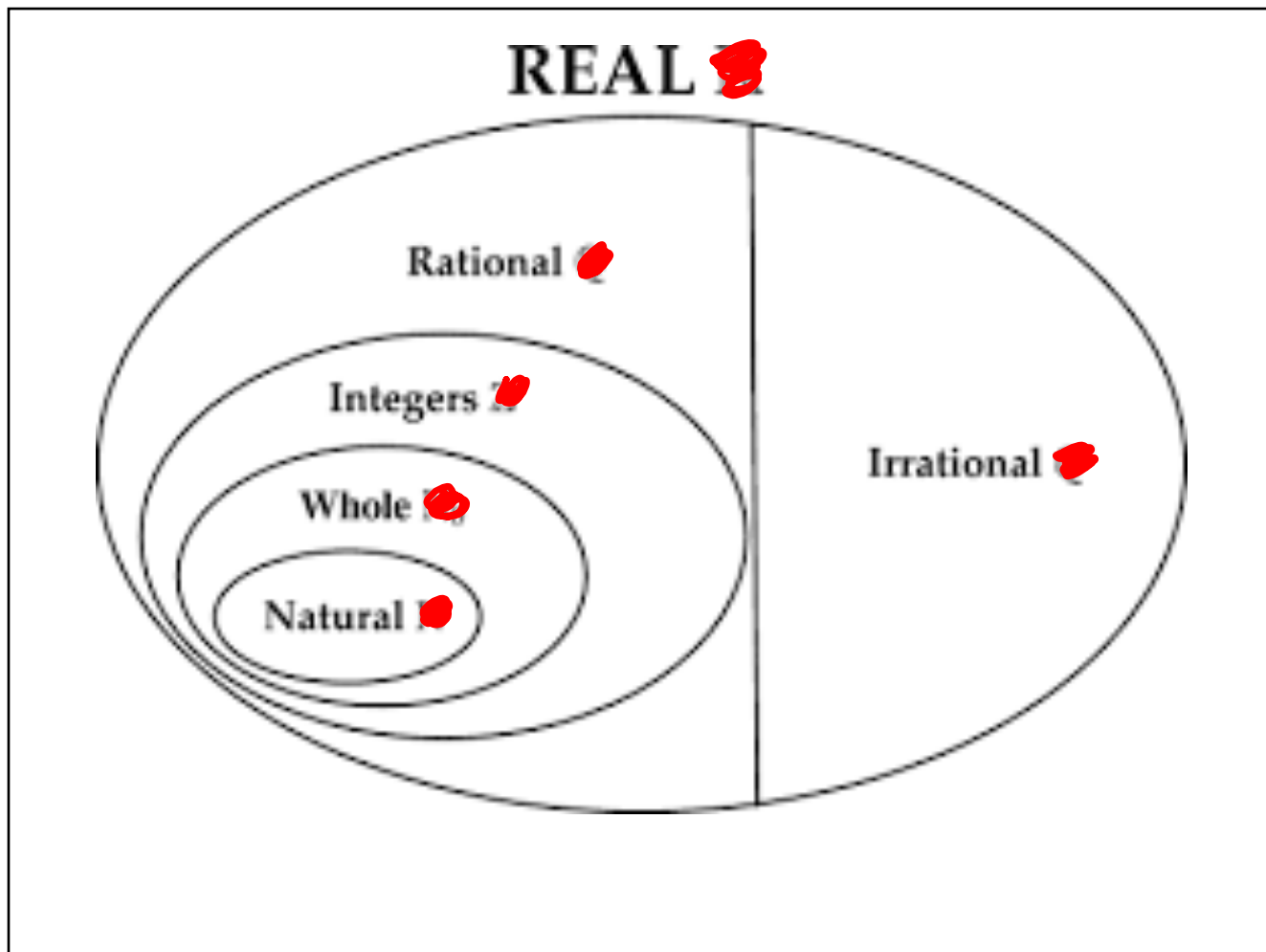
Irrational Numbers - numbers that are not rational $0.159296380526\dots$

π $\sqrt{2}$ $\sqrt{3}$ $\sqrt{5}$ $\sqrt{6}$ $\sqrt{7}$ $\sqrt{8}$ $\sqrt{10}$

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	