Name _____

Date _____ Pd_____

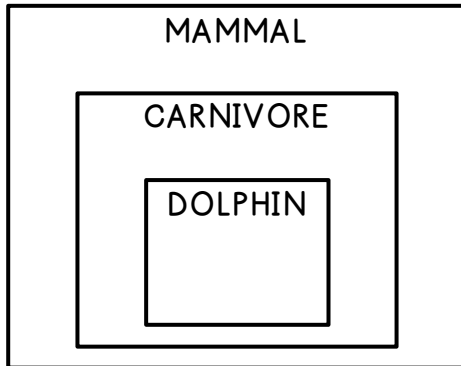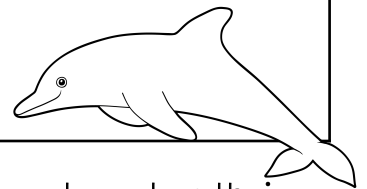# CLASSIFYING RATIONAL NUMBERS

In biology class, students are learning to classify different animals into the diagram below.

MAMMAL

CARNIVORE

DOLPHIN

a. If an animal is a dolphin, are they also a mammal? Why or why not?

b. If an animal is a carnivore, are they also a dolphin?

c. If you are asked to classify a horse, in which part of the diagram does it belong?
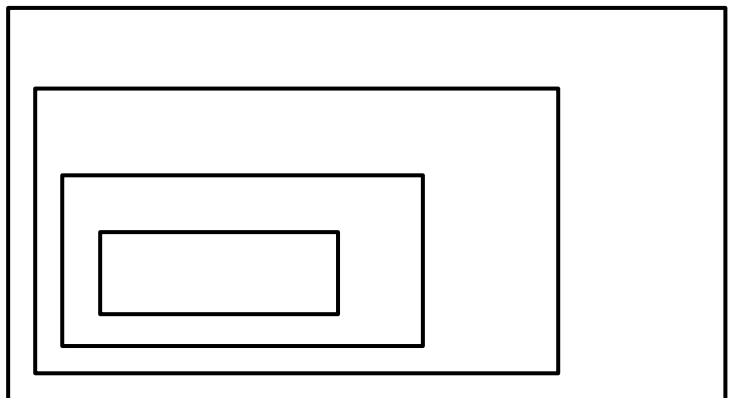
The number system classifies numbers into _____ and _____ based on their type and characteristics.

NATURAL NUMBERS	• The set of _____ integers
	• Examples: _____
WHOLE NUMBERS	• The set of all positive counting numbers starting with _____
	• Examples: _____
INTEGERS	• The set of whole numbers and their _____
	• Examples: _____
RATIONAL NUMBERS	• Numbers that can be written as fractions, terminating decimals, and _____ decimals
	• Examples: _____

1. Place the headings for each type of number in the graphic organizer at the right. Then, write the following values in the box where they belong.
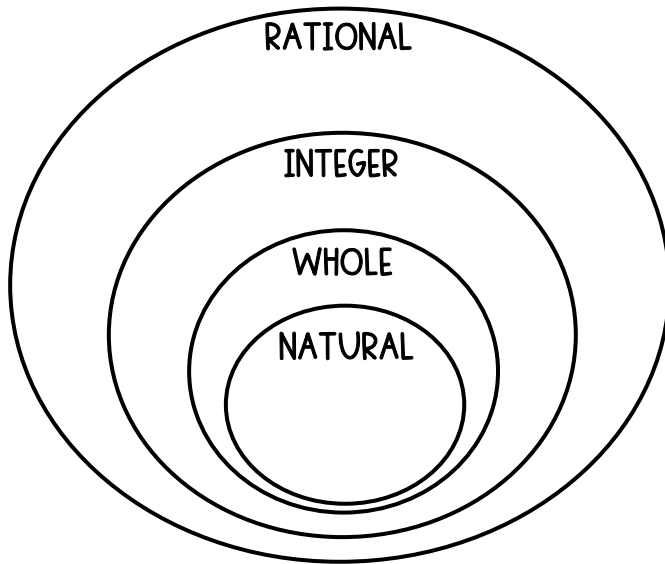
$\dfrac{16}{4}$ -19 $\dfrac{3}{5}$

3^2 0   -6.1

Use your understanding of the number system to answer the questions below.

2. Use the graphic organizer below to correctly place each of the following values.

$$0.125, 308, -6, -\frac{2}{3}, 0, -41, -3.7, 22, \frac{4}{5}$$

RATIONAL

INTEGER

WHOLE

NATURAL

3. Four different statements about the number system are written below. Determine which statements are true and which are false. Correct any false statements.
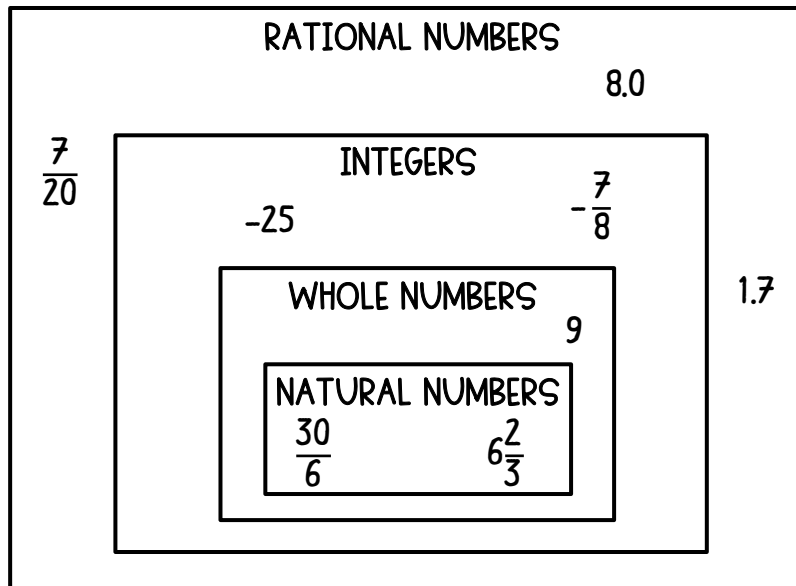
#1: A rational number is always an integer

#2: All natural numbers are integers

#3: All negative numbers are rational numbers

#4: All rational numbers are either fractions or decimals

4. The students in Mrs. Caldwell's class sorted eight different numbers into a diagram representing the number system. Determine if the numbers listed are in the correct location and correctly label any numbers that are misplaced.

RATIONAL NUMBERS

8.0

$\frac{7}{20}$

INTEGERS

-25 $-\frac{7}{8}$

WHOLE NUMBERS

9

NATURAL NUMBERS

$\frac{30}{6}$ $6\frac{2}{3}$

1.7

-25: _____

$-\frac{7}{8}$: _____

$\frac{7}{20}$: _____

9: _____

1.7: _____

8.0: _____

$\frac{30}{6}$: _____

$6\frac{2}{3}$: _____

Summarize today's lesson: