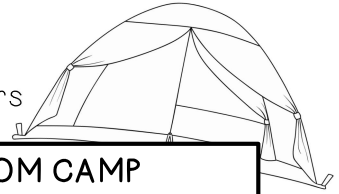


CLASSIFYING REAL NUMBERS

This past summer, Ethan spent a week at summer camp. He met several campers that could be described using the categories below.

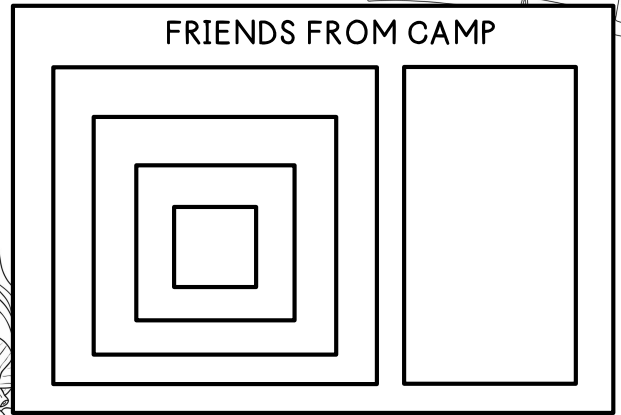


- A. SAME CITY
- B. SAME CLASS
- C. SAME STATE
- D. SAME SCHOOL
- E. DIFFERENT STATE

• Using the graphic organizer above, place the letter of each category where you think it belongs.

• Ryan is one of Ethan's camp friends who is in his first period math class. List all the sections of the graphic organizer that Ryan's name could belong. _____

• Which would be the best section to place Ryan's name in? Explain.



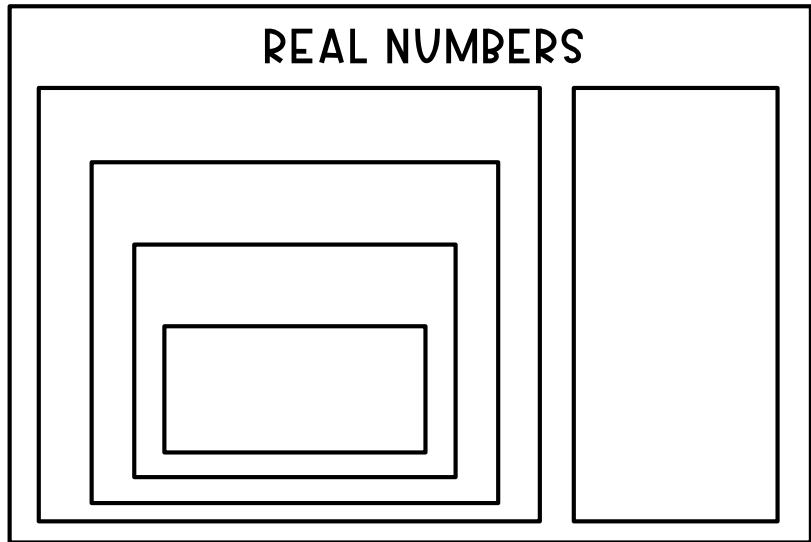
Graphic organizers can also be used to show the relationship between types of real numbers. Use the table to define each type of real number and list at least 3 examples of each.

	DEFINITION	EXAMPLES
NATURAL	<ul style="list-style-type: none"> • The set of all positive counting numbers (numbers on a number line); starting with _____ 	
WHOLE	<ul style="list-style-type: none"> • The set of all positive counting numbers starting with _____ 	
INTEGERS	<ul style="list-style-type: none"> • The set of whole numbers and their _____ 	
RATIONAL	<ul style="list-style-type: none"> • Numbers that can be written as fractions • Terminating decimals, repeating decimals and square roots of _____ squares 	
IRRATIONAL	<ul style="list-style-type: none"> • Numbers that cannot be written as _____ • Non-terminating decimals, non-repeating decimals and square roots of _____ squares 	

1. Place the headings for each type of real number in the graphic organizer below. Then, write the following values in the box where they belong.

VALUES:

$2\sqrt{64}$	-15	$\frac{16}{4}$
$\sqrt{75}$	0	-12.2



2. List all of the number sets that each value below belongs to. Circle the most specific set for each real number.

a. 12π _____

b. $\sqrt{30}$ _____

c. $\frac{45}{5}$ _____

d. $-\sqrt{64}$ _____

e. 50.75 _____

If possible, give an example of each of the following. If not possible, explain why.

3. An irrational number with a value greater than 10	4. An integer between -5 and -6
5. A whole number less than 0	6. A rational number represented as a square root

Summarize today's lesson: