DIGITAL

NAME _____   **DATE** _____

Module 1   Getting Ready for Algebra
Lesson 1   Defining Sets and Real Numbers

guided notes

Lesson Objectives

- Use appropriate set notation.
- Use Venn Diagrams to show set relationships.
- Describe sets of numbers.
- Classify numbers.
- Graph numbers on a number line.

A set is a collection of objects.

The symbol $\in$ means "is an _____ of."

The symbol $\subset$ means "is a _____ of."

1▸ Name an element of set X. _____

2▸ Name a subset of set Y. _____

Sets that have no elements in common are called _____.

A Venn diagram uses _____ and _____ to show

the relationship of sets.

3▸ Are sets A and X disjoint? _____

The _____ of two or more sets is the set of elements those sets

have in common.

This is shown in a Venn diagram when circles _____.

The symbol $\cap$ is used to show an intersection.

The _____ of two or more sets is the set of all the elements

contained in those sets.

The symbol $\cup$ is used to show a union.

N = {1, 2, 3, 4, ...} is a listing of the _____ numbers.

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Another name for natural numbers is _____ numbers.

The _____ numbers are the elements of the set of natural numbers and zero.

The set of _____ numbers is represented by the letter W.

The set of _____ includes all the whole numbers and their opposites. The letter _____ is often used to represent the set of integers.

4▸ Write an example of how negative integers are used in the real world?

_____

The rational numbers can be written as Q = _____.

A ratio is another name for a _____ and belongs to the set of _____ numbers.

5▸ Where could you see rational numbers used in the real world?

_____

The set of real numbers that are not rational is called _____ numbers.

Irrational numbers include numbers such as _____

_____.

The set which is the union of the rational numbers and the irrational numbers is called the set of _____ numbers. This set is represented by the letter _____.

Use the space below to draw the Venn diagram of the real numbers.

Use the number line to graph the numbers –2.3, 2, $\sqrt{8}$, and $\frac{1}{5}$.