

# Algebra I

## 8.4 Worksheet #1

### Defining Union and Intersection

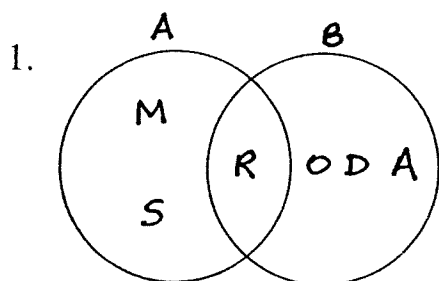
NAME: \_\_\_\_\_

DATE: \_\_\_\_\_ HOUR: \_\_\_\_\_

### Part I. Completion

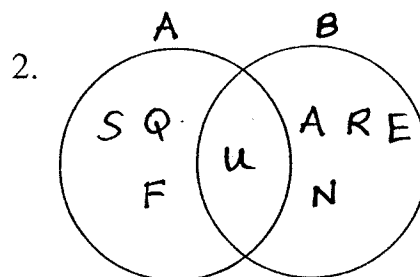
1. Items in a set are called \_\_\_\_\_.
2. To list elements in a set, use set symbols and separate the elements with \_\_\_\_\_.
3. The combining or “putting together” of sets is called a \_\_\_\_\_ of sets.
4. Where sets overlap or what sets have in common is called an \_\_\_\_\_.
5. The symbol for union is \_\_\_\_\_ and it is associated with the word “\_\_\_\_\_”.
6. The symbol for intersection is \_\_\_\_\_ and it is associated with the word “\_\_\_\_\_”.
7. If two sets have nothing in common, they are called \_\_\_\_\_ sets.
8. An empty set can be noted by empty set symbols { } or the symbol \_\_\_\_\_.

### Part II. Practice



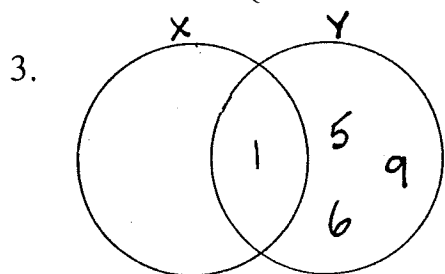
$$A \cup B = \{$$

$$A \cap B = \{$$



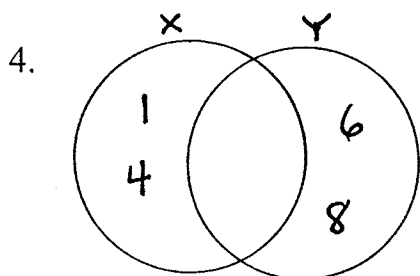
$$A \cup B = \{$$

$$A \cap B = \{$$



$$X \cup Y = \{$$

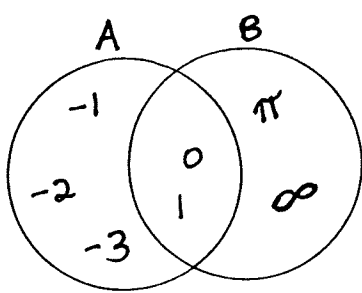
$$X \cap Y = \{$$



$$X \cup Y = \{$$

$$X \cap Y = \{$$

5.



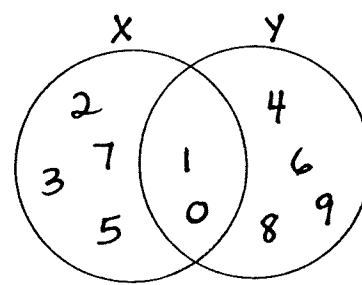
$$A = \{$$

$$B = \{$$

$$A \cup B = \{$$

$$A \cap B = \{$$

6.



$$X = \{$$

$$Y = \{$$

$$X \cup Y = \{$$

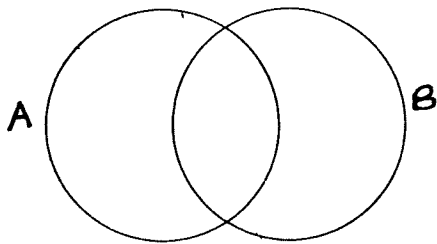
$$X \cap Y = \{$$

7.

$$A = \{1, 3, 4, 5, 6\}$$

$$B = \{3, 5, 7, 9, 10\}$$

Draw a Venn Diagram for sets A and B.



$$A \cup B = \{$$

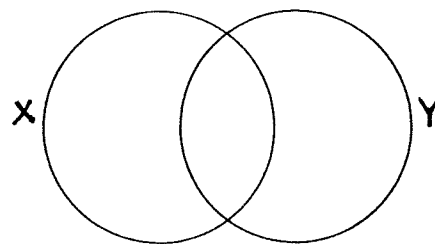
$$A \cap B = \{$$

8.

$$X = \{a, c, d, e, f, g\}$$

$$Y = \{a, f\}$$

Draw a Venn Diagram for sets X and Y.



$$X \cup Y = \{$$

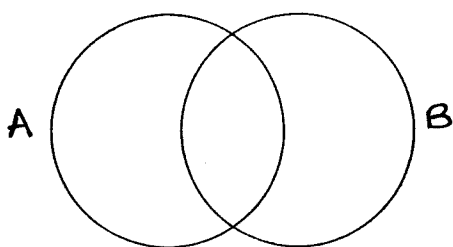
$$X \cap Y = \{$$

9.

$$A = \{1, 3, 4, 5\}$$

$$B = \{1, 3, 4, 5\}$$

Draw a Venn Diagram for sets A and B.



$$A \cup B = \{$$

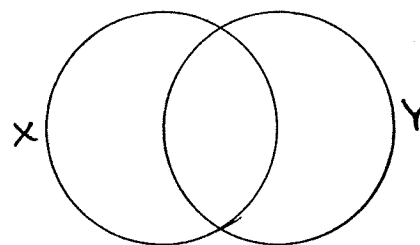
$$A \cap B = \{$$

10.

$$X = \{a, c, d, e, f, g\}$$

$$Y = \{h, j\}$$

Draw a Venn Diagram for sets X and Y.



$$X \cup Y = \{$$

$$X \cap Y = \{$$