

Algebra I
8.4 Warm-Up #1
Union and Intersection

NAME: _____
DATE: _____ HOUR: _____

Completion

1. A diagram of interlocking circles that represent sets is called a _____ diagram.
2. Items in a set are called _____.
3. The combining or “putting together” of sets is called a _____ of sets.
4. The symbol for union is _____ and it is associated with the word “_____”.
5. Where sets overlap or what sets have in common is called an _____.
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 _____.

List the integers from 1 to 10 inclusive that are

1. odd _____
2. multiples of 2 _____
3. odd AND multiples of 2 _____
4. odd OR multiples of 2 _____

List the integers from 1 to 20 inclusive that are

5. multiples of 4 _____
6. multiples of 3 _____
7. multiples of 4 AND multiplies of 3. _____

A marketing representative gave supermarket customers a sample taste of a new soft drink. Study the data.

	Liked drink	Disliked drink	Total
Men	16	14	30
Women	19	10	29
Total	35	24	59

8. How many customers are men? _____
9. How many customers dislike the taste of the new soft drink? _____
10. How many customers are men AND dislike the taste of the soft drink? _____
11. How many customers are men OR dislike the taste of the soft drink? _____

INTERSECTION OF TWO SETS

Complete the following.

1. $C = \{1, 3, 5, 7, 9\}$ and $D = \{2, 3, 5, 7\}$

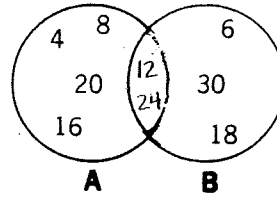
$$C \cap D =$$

2. $R = \{1, 2, 3, 4, 5, 6, 7\}$ and $S = \{3, 5, 7, 9, 11\}$

$$R \cap S =$$

3. The diagram shows $A \cap B = \{ _, _ \}$.

4. Use braces to list the six members of A.



5. Use braces to list the five members of B.

UNION OF TWO SETS

Complete the following.

1. $A = \{1, 2, 3, 4\}$ $B = \{3, 4, 5, 6, 7\}$ $A \cup B =$ _____

2. $X = \{2, 5, 7\}$ $Y = \{1, 3, 5, 6\}$ $X \cup Y =$ _____

List the members in each union or intersection.

$$A = \{1, 2, 3, 4, 5\} \quad B = \{2, 4, 6, 7\} \quad C = \{6, 7, 8, 9\}$$

3. $A \cup B$

4. $A \cap B$

5. $B \cup C$

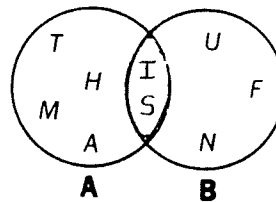
6. $A \cap C$

7. $A \cup C$

8. $B \cap C$

From the diagram list the following.

9. The members of set A.



10. The members of set B.

11. $A \cap B = \{ _, _ \}$.

12. List the members of the following subsets of S.

$$S = \{1, 2, 4, 7, 9, 10, 15\}$$

All multiples of 3.

All multiples of 2.

All multiples of 5.