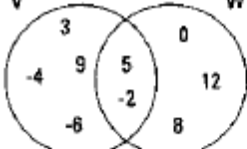
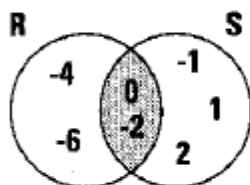


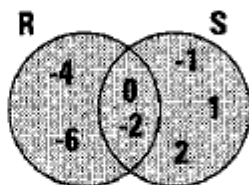
1.  For the Venn diagram at the left, list the elements of  $\{-6, -4, -2, 0, 3, 5, 8, 9, 12\}$
- a.  $V \cup W$   $\{-6, -4, -2, 0, 3, 5, 8, 9, 12\}$
- b.  $V \cap W$   $\{-2, 5\}$

2. Let  $R = \{0, -2, -4, -6\}$  and  $S = \{-2, -1, 0, 1, 2\}$ . Draw a Venn diagram to illustrate

a.  $R \cap S$ .



b.  $R \cup S$ .



3. Let  $A = \{1, 4, 9, 16, 25\}$  and  $B = \{2, 4, 8, 16\}$ .

a. Give the union of A and B.  $\{1, 2, 4, 8, 9, 16, 25\}$

b. Give the intersection of A and B.  $\{4, 16\}$

4. Let G = the set of divisors of 18 and H = the set of divisors of 27. List the elements of  $G \cap H$ .

$\{1, 3, 9\}$

**Properties** Objective E: Read and interpret set language and notation.

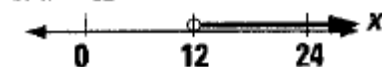
5. When is the intersection of two sets equal to the null set? **Sample:**  
**when the sets have no elements in common**

7. Graph the solution sets. Let the domain be the set of real numbers.

a.  $x < 18$



b.  $x > 12$



c.  $x > 12$  and  $x < 18$

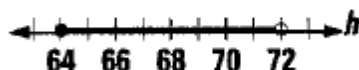


d.  $x > 12$  or  $x < 18$



8. The heights, in inches, of the members of the drill team satisfy the inequality  $64 \leq h < 72$ .

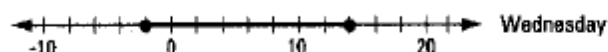
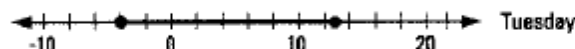
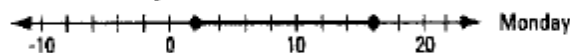
a. Graph this interval.



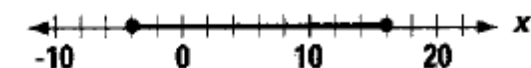
b. Describe the interval with two inequalities linked by the word "and."

$h \geq 64$  and  $h < 72$  or  $64 \leq h$  and  $72 > h$

9. A meteorologist graphed the temperatures for Monday, Tuesday, and Wednesday.



a. Graph the temperatures during the three-day period.



b. Is your answer to Part a the union or the intersection of the three graphs?

union

c. To describe the interval from Part a, fill in the blanks:

$-4$   $\leq x \leq$   $16$