

Date:

Section:

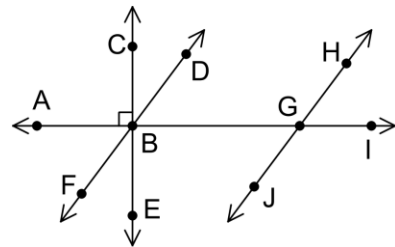
Objective:

**Review of angles:**

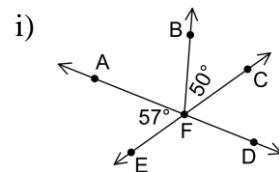
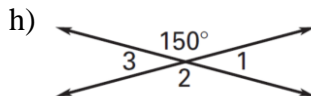
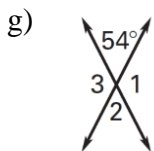
Name of angle	Definition	Picture	Relationship of the angles
Complementary Angles			
Supplementary Angles			
Linear Pair			
Adjacent Angles			
Vertical Angles			

Use the diagram at the right to answer the following questions.

- Name two pairs of vertical angles.
- Name two sets of angles that form linear pairs.
- Name two pairs of complementary angles.
- Name two pairs of supplementary angles.
- Name two pairs of congruent angles.
- Name a pair of adjacent angles that are neither complementary nor supplementary.

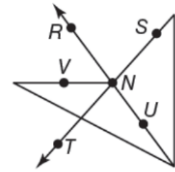


**Examples:** Find the missing angle measures.



Use the diagram to the right to answer the following questions.

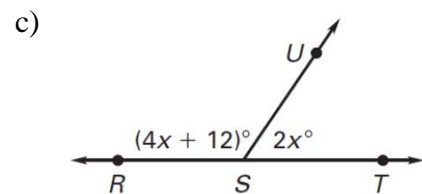
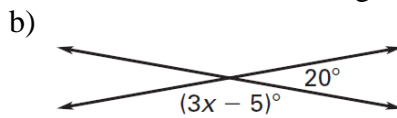
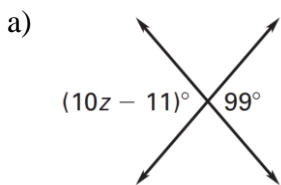
- a) Name an angle congruent to  $\angle RNT$ . How do you know the angles are congruent?
- b) Name an angle congruent to  $\angle RNS$ . How do you know the angles are congruent?



**Angle Algebra Problem Tips:**

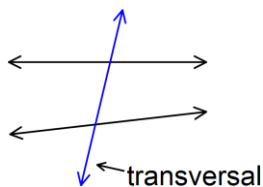
- Ask yourself: “Are the angle measures equal to each other, or do they add up to something?”
  - If the angles are congruent, set one measure equal to the other.
  - If the angles are supplementary, add the measures together and set the sum equal to  $180^\circ$ .
  - If the angles are complementary, add the measures together and set the sum equal to  $90^\circ$ .

**Examples:** Find the value of the variable and the size of each angle.

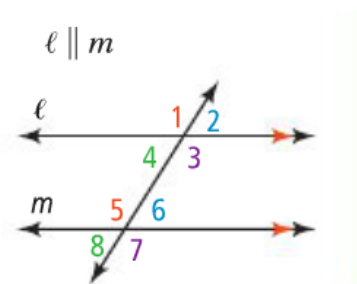
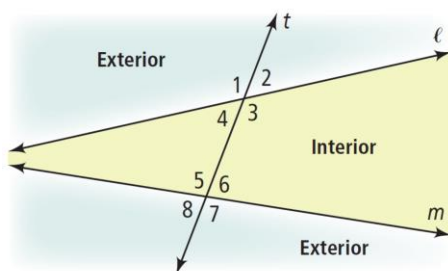


- d) How big is the complement of a  $57^\circ$  angle?
- e) Two angles are supplementary. The measure of one angle is  $152^\circ$ . What is the measure of the other?

**Transversal:** A line that intersects two or more coplanar lines at different points.



The lines do not need to be parallel to be intersected by a transversal.

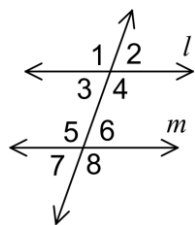


Now we are going to focus on the relationship between the angles formed if the lines are parallel and intersected by a transversal.

**Types of angles formed by a transversal intersecting two or more coplanar lines at different points**

Name of angles	Definition	Picture	Relationship if the lines are parallel
Corresponding Angles			
Alternate Exterior Angles			
Alternate Interior Angles			
Same-Side Interior Angles			

**Examples:** Identify the following angle pairs. Name all possible pairs in the diagram.



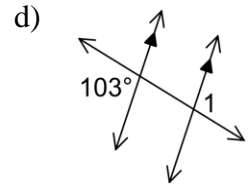
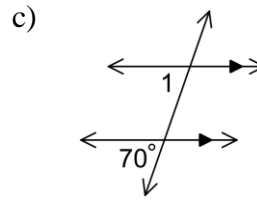
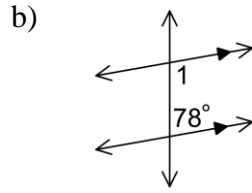
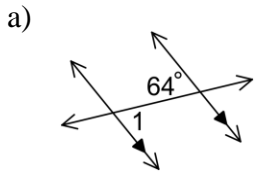
Corresponding Angles \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Alternate Exterior Angles \_\_\_\_\_, \_\_\_\_\_

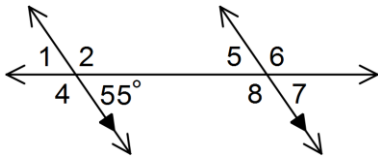
Alternate Interior Angles \_\_\_\_\_, \_\_\_\_\_

Same-Side Interior Angles \_\_\_\_\_, \_\_\_\_\_

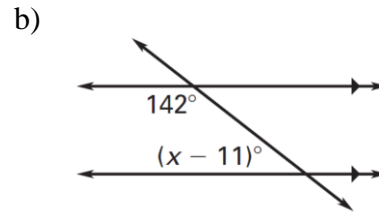
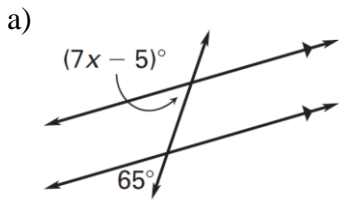
**Examples:** Find  $m\angle 1$  in each diagram. Give a reason for each answer.



**Example:** Find the measure of each numbered angle.



**Examples:** Find the value of  $x$ .



**Examples:** Find the value of  $x$ . Then find the degree of both angles.

