

# GUIDED PRACTICE

## Vocabulary Check ✓

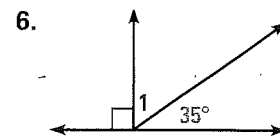
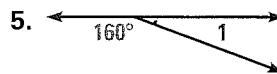
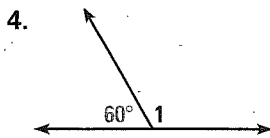
1. Explain the difference between *complementary angles* and *supplementary angles*.

## Concept Check ✓

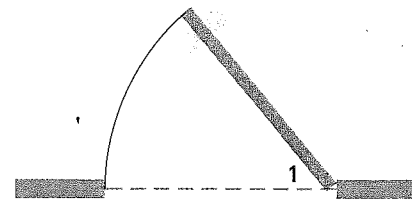
2. Sketch examples of acute vertical angles and obtuse vertical angles.  
 3. Sketch examples of adjacent congruent complementary angles and adjacent congruent supplementary angles.

## Skill Check ✓

### FINDING ANGLE MEASURES Find the measure of $\angle 1$ .



7. **OPENING A DOOR** The figure shows a doorway viewed from above. If you open the door so that the measure of  $\angle 1$  is  $50^\circ$ , how many more degrees would you have to open the door so that the angle between the wall and the door is  $90^\circ$ ?



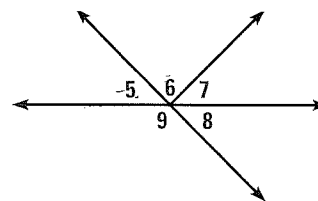
# PRACTICE AND APPLICATIONS

### STUDENT HELP

→ **Extra Practice** to help you master skills is on p. 804.

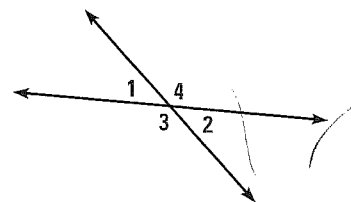
### IDENTIFYING ANGLE PAIRS Use the figure at the right.

8. Are  $\angle 5$  and  $\angle 6$  a linear pair?  
 9. Are  $\angle 5$  and  $\angle 9$  a linear pair?  
 10. Are  $\angle 5$  and  $\angle 8$  a linear pair?  
 11. Are  $\angle 5$  and  $\angle 8$  vertical angles?  
 12. Are  $\angle 5$  and  $\angle 7$  vertical angles?  
 13. Are  $\angle 9$  and  $\angle 6$  vertical angles?



### EVALUATING STATEMENTS Decide whether the statement is *always*, *sometimes*, or *never* true.

14. If  $m\angle 1 = 40^\circ$ , then  $m\angle 2 = 140^\circ$ .  
 15. If  $m\angle 4 = 130^\circ$ , then  $m\angle 2 = 50^\circ$ .  
 16.  $\angle 1$  and  $\angle 4$  are congruent.  
 17.  $m\angle 2 + m\angle 3 = m\angle 1 + m\angle 4$   
 18.  $\angle 2 \cong \angle 1$   
 19.  $m\angle 2 = 90^\circ - m\angle 3$



### STUDENT HELP

#### HOMEWORK HELP

- Example 1:** Exs. 8–13  
**Example 2:** Exs. 14–27  
**Example 3:** Exs. 28–36  
**Example 4:** Exs. 37–40  
**Example 5:** Exs. 41, 42  
**Example 6:** Exs. 43, 44

**FINDING ANGLE MEASURES** Use the figure at the right.

20. If  $m\angle 6 = 72^\circ$ , then  $m\angle 7 = \underline{\quad? \quad}$ .

21. If  $m\angle 8 = 80^\circ$ , then  $m\angle 6 = \underline{\quad? \quad}$ .

22. If  $m\angle 9 = 110^\circ$ , then  $m\angle 8 = \underline{\quad? \quad}$ .

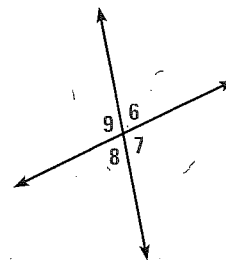
23. If  $m\angle 9 = 123^\circ$ , then  $m\angle 7 = \underline{\quad? \quad}$ .

24. If  $m\angle 7 = 142^\circ$ , then  $m\angle 8 = \underline{\quad? \quad}$ .

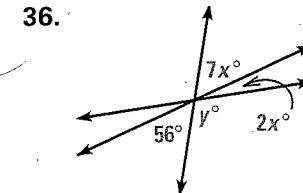
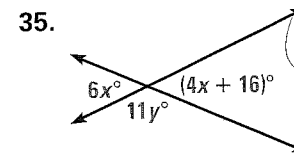
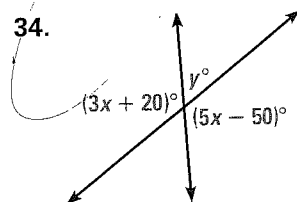
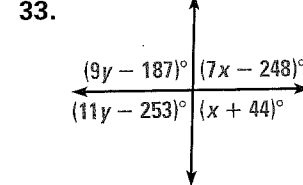
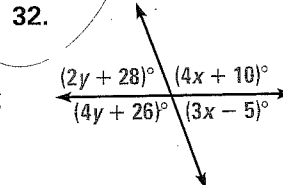
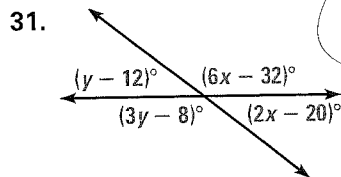
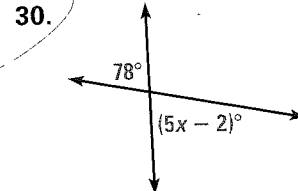
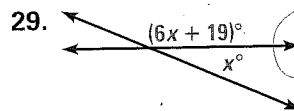
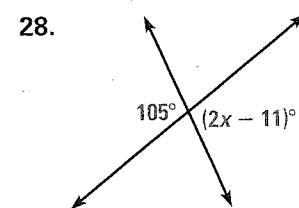
25. If  $m\angle 6 = 13^\circ$ , then  $m\angle 9 = \underline{\quad? \quad}$ .

26. If  $m\angle 9 = 170^\circ$ , then  $m\angle 6 = \underline{\quad? \quad}$ .

27. If  $m\angle 8 = 26^\circ$ , then  $m\angle 7 = \underline{\quad? \quad}$ .



**USING ALGEBRA** Find the value(s) of the variable(s).



**IDENTIFYING ANGLES** State whether the two angles shown are *complementary*, *supplementary*, or *neither*.

