NAME _____ DATE _____
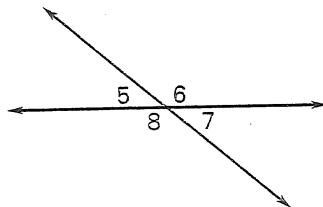
Practice B

For use with pages 109–116

Use the diagram to decide whether the statement is *true* or *false*.

1. If $m\angle 5 = 42°$, then $m\angle 6 = 48°$.

2. If $m\angle 5 = 42°$, then $m\angle 7 = 42°$.

3. $m\angle 5 + m\angle 7 = m\angle 6 + m\angle 8$

4. $m\angle 5 + m\angle 8 = m\angle 6 + m\angle 7$

Make a sketch of the given information. Label all angles which can be determined.

5. Adjacent complementary angles where one angle measures 42°

6. Nonadjacent supplementary angles where where one angle measures 42°

7. Congruent linear pairs

8. Vertical angles which measure 42°

Solve for x.

9. $(4x - 17)°$ $(2x + 9)°$

10. $(3x + 8)°$ $(7x + 2)°$

11. $79°$ $(3x - 5)°$
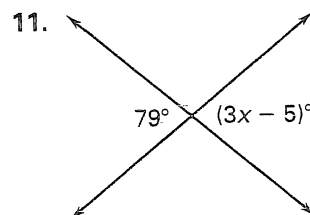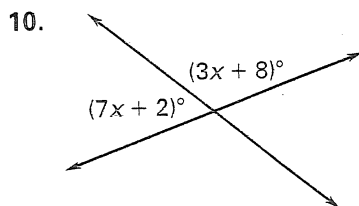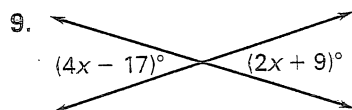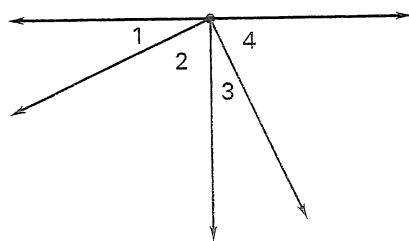
12. Give a reason for each step of the proof.

Given: $\angle 1$ and $\angle 2$ are complementary.
$\angle 1 \cong \angle 3, \angle 2 \cong \angle 4$

Prove: $\angle 3$ and $\angle 4$ are complementary.

Statements	Reasons
1. $\angle 1$ and $\angle 2$ are complementary.	1. Given
2. $m\angle 1 + m\angle 2 = 90°$	2. ___?___
3. $\angle 1 \cong \angle 3, \angle 2 \cong \angle 4$	3. Given
4. $m\angle 1 = m\angle 3, m\angle 2 = m\angle 4$	4. ___?___
5. $m\angle 3 + m\angle 2 = 90°$	5. ___?___
6. $m\angle 3 + m\angle 4 = 90°$	6. ___?___
7. $\angle 3$ and $\angle 4$ are complementary.	7. ___?___

13. Write a two-column proof.

Given: $\angle 2 \cong \angle 3$

Prove: $\angle 1 \cong \angle 4$