

State the theorem or postulate that justifies each statement.

1. If  $\angle 1 \cong \angle 4$ , then  $p \parallel q$ .

2.  $\angle 6 \cong \angle 8$

3.  $m\angle 7 + m\angle 8 = 180$

4.  $\angle 5 \cong \angle 8$

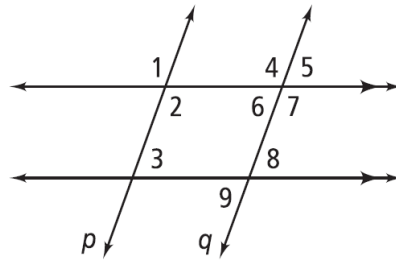
5. If  $\angle 2 \cong \angle 4$ , then  $p \parallel q$ .

6.  $\angle 8 \cong \angle 9$

7. If  $\angle 3 \cong \angle 8$ , then  $p \parallel q$ .

8.  $\angle 6 \cong \angle 9$

9. If  $m\angle 2 + m\angle 6 = 180$ , then  $p \parallel q$ .



Name two pairs of each type of angle.

10. Corresponding

11. Alternate interior

12. Vertical

13. Same-side interior

14. Same-side exterior

15. **Error Analysis** A student made the following incorrect statement. What is wrong with her statement? How do you know?

If the alternate interior angles formed by three intersecting lines are complementary, then two of the lines are parallel.

16. **Open-Ended** Give an example from your classroom of two lines that are skew.