LESSON 6.6

NAME _____ DATE _____

Practice C

For use with pages 364–370

Draw the sides or diagonals of *ABCD* as described. What special type of quadrilateral is *ABCD*?

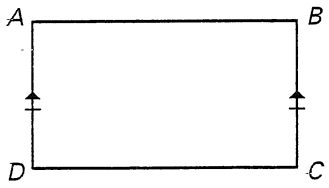
1. $\overline{AC} \cong \overline{BD}$, $\overline{AC}$ and $\overline{BD}$ bisect one another, but $\overline{AC}$ is not perpendicular to $\overline{BD}$.
2. $\overline{AB} \cong \overline{BC}$ and $\overline{CD} \cong \overline{DA}$, but $\overline{BC} \ncong \overline{CD}$.
3. $\overline{AB} \parallel \overline{CD}$ and $\overline{BC} \cong \overline{DA}$.
4. $\overline{AC} \perp \overline{BD}$, $\overline{AC}$ and $\overline{BD}$ bisect one another, but $\overline{AC} \ncong \overline{BD}$.
5. $\overline{AC} \perp \overline{BD}$, $\overline{AC}$ and $\overline{BD}$ bisect one another, and $\overline{AC} \cong \overline{BD}$.

Determine whether the statement is *always*, *sometimes*, or *never* true.

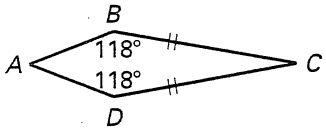
6. Diagonals of a trapezoid are congruent.
7. Opposite sides of a rectangle are congruent.
8. A square is a rectangle.
9. A square is not a rhombus.
10. All angles of a parallelogram are congruent.
11. Opposite angles of an isosceles trapezoid are congruent.
12. The diagonals of a parallelogram are perpendicular.

Which two segments or angles must be congruent to enable you to prove *ABCD* is the given quadrilateral? Explain your reasoning. There may be more than one right answer.

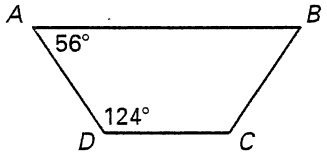
13. rectangle



14. kite



15. isosceles trapezoid



In Exercises 16–18, what kind of quadrilateral is *PQRS*? Justify your answer.

16. $P(-1, 3)$, $Q(4, 2)$, $R(1, -1)$, $S(-4, 0)$
17. $P(-3, 5)$, $Q(-7, 6)$, $R(-9, -2)$, $S(-5, -3)$
18. $P(-2, 9)$, $Q(-2, -1)$, $R(-5, 5)$, $S(-5, 7)$

19. Use the quadrilateral in Exercise 17. Find the midpoint of each side. Connect the midpoints to form a new quadrilateral. What kind of quadrilateral is formed?