Name _____ **Date** _____

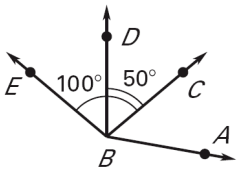
LESSSON 2.6

Practice C

For use with pages 112-119

In Exercises 1 and 2, complete the proof.

1. **GIVEN:** $\angle ABC \cong \angle CBD$, $m\angle CBD = 50°$, $m\angle CBE = 100°$
   PROVE: $m\angle ABC \cong \angle DBE$



Statements	Reasons
1. $\angle ABC \cong \angle CBD$, $m\angle CBD = 50°$, $m\angle CBE = 100°$	**1.** __?__
2. __?__ $= m\angle CBE$	**2.** Angle Addition Postulate
3. $50° + m\angle DBE = 100°$	**3.** __?__
4. $m\angle DBE = 50°$	**4.** __?__
5. $m\angle CBD =$ __?__	**5.** Substitution Property of Equality
6. __?__	**6.** Definition of congruent angles
7. $\angle ABC \cong \angle DBE$	**7.** __?__

Use the property to complete the statement.

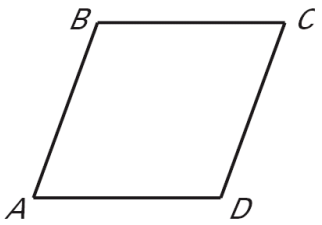
3. Transitive Property of Congruence: If $\angle 1 \cong \angle 5$ and __?__, then $\angle 1 \cong \angle 7$.

4. Symmetric Property of Congruence: If $\angle 1 \cong \angle 2$ and $\angle 3 \cong \angle 4$, then __?__?.

2. The lengths of the sides of quadrilateral *ABCD* are equal. Prove that the perimeter of *ABCD* is equal to 4*AB*.

GIVEN: $\overline{AB} \cong \overline{BC}$, $\overline{BC} \cong \overline{CD}$, $\overline{CD} \cong \overline{AD}$

PROVE: Perimeter of *ABCD* = 4*AB*



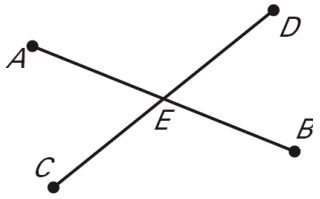
Statements	Reasons
2. $\overline{AB} \cong \overline{BC}$, $\overline{BC} \cong \overline{CD}$, $\overline{CD} \cong \overline{AD}$	**1.** __?__
3. $AB = BC, BC = CD, CD = AD$	**2.** __?__
4. $AB = CD, AB = AD$	**3.** __?__
5. Perimeter of $ABCD = AB + BC + CD + AD$	**4.** __?__
6. __?__	**5.** Substitution Property of Equality
7. __?__	**6.** Simplify.

8. Write a two-column proof.

GIVEN: $\overline{AE} \cong \overline{CE}$

$\overline{AB} \cong$ and $\overline{CD}$ bisect each other.

PROVE: $\overline{EB} \cong \overline{ED}$ Statements



Statements	Reasons