NAME DATE PERIOD

Assessment

Rigid Transformations and Congruence: End-of-Unit Assessment

A straight edge and tracing paper are required for this assessment.

1. Select **all** the true statements.

   A. Two squares with the same side lengths are always congruent.

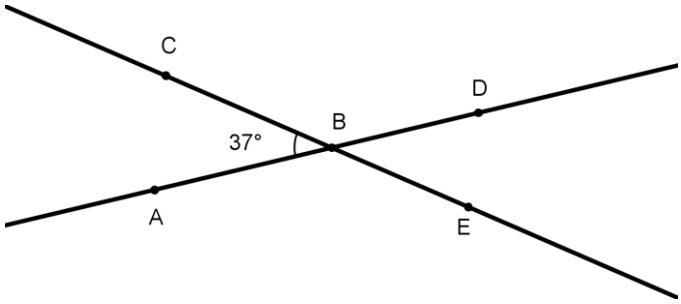
   B. Two rectangles with the same side lengths are always congruent.

   C. Two rhombuses with the same side lengths are always congruent.

   D. Two parallelograms with the same side lengths are always congruent.

   E. Two quadrilaterals with the same side lengths are always congruent.

2. Lines CE and AD intersect at B.



   Select **all** the true statements.

   A. The measure of angle CBA is equal to the measure of angle DBE.

   B. The sum of the measures of angles CBA and DBE is 180 degrees.

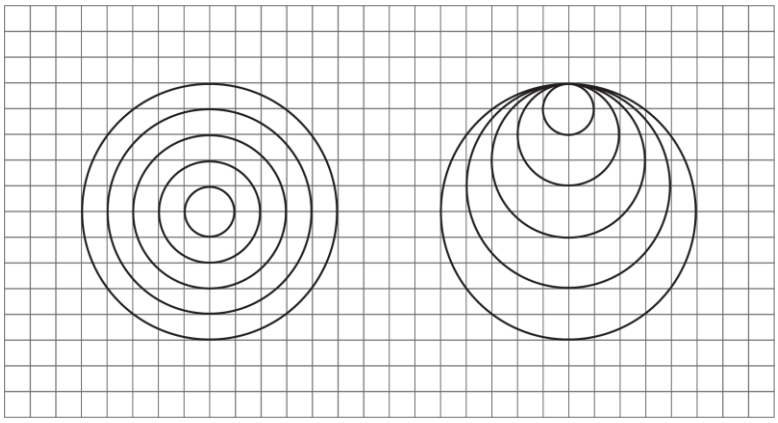
   C. The measure of angle CBD is equal to the measure of angle ABE.

   D. The sum of the measures of angles CBD and CBA is 180 degrees.

   E. The sum of the measures of angles CBA and DBE is 90 degrees.

NAME DATE PERIOD

3. Diego made the shape on the left, and Elena made the shape on the right. Each shape uses 5 circles.



Select **all** the true statements.

A. The smallest circle in Diego's design is congruent to the smallest circle in Elena's design.

B. Diego's design is congruent to Elena's design.

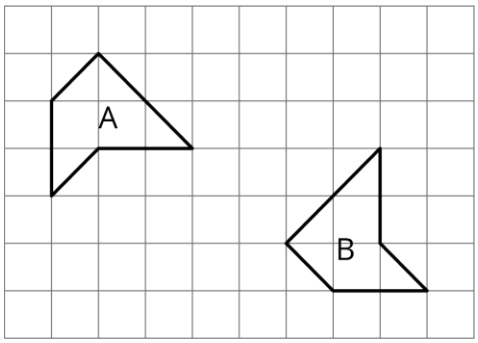
C. Elena's design is a translation of Diego's design.

D. The largest circle in Elena's design is congruent to the largest circle in Diego's design.

E. Each circle in the Elena's design has a congruent circle within Diego's design.

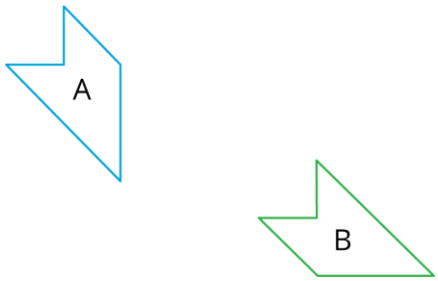
NAME DATE PERIOD

4. Describe a sequence of transformations that shows that Polygon A is congruent to Polygon B.

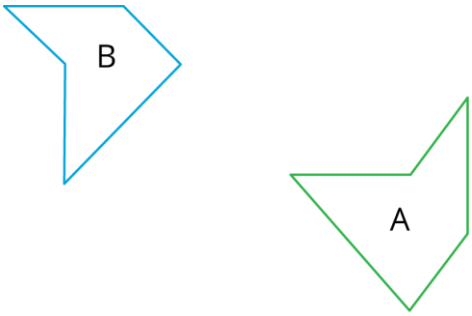


5. For each pair of shapes, decide whether or not Shape A is congruent to Shape B. Explain your reasoning.

   a. First pair:

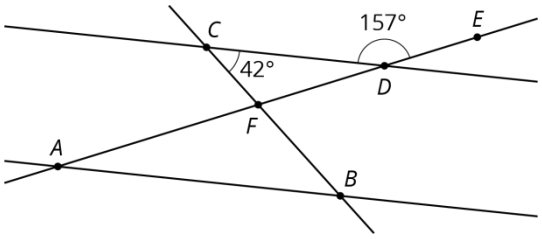


   b. Second pair:

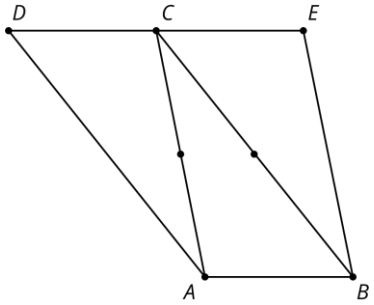


NAME DATE PERIOD

6. Lines AB and CD are parallel. Find the measures of the three angles in triangle ABF.



7. Triangle CDA is the image of triangle ABC after a 180° rotation around the midpoint of segment AC. Triangle ECB is the image of triangle ABC after a 180° rotation around the midpoint of segment BC.



a. Explain why $ABCD$ and $ABEC$ are parallelograms.

b. Identify at least two pairs of congruent angles in the figure and explain how you know they are congruent.

c. Explain how to use what you know about the sum of the angles in a triangle to figure out the sum of the angles of quadrilateral $ABED$.