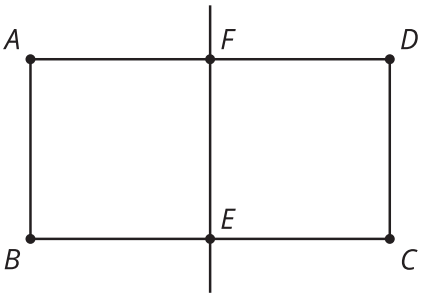
Lesson 1 Practice Problems

1. When rectangle $ABCD$ is reflected across line EF, the image is $DCBA$. How do you know that segment AB is congruent to segment DC?



   A. A rectangle has 2 pairs of parallel sides.

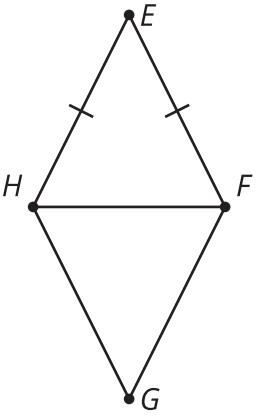
   B. Any 2 sides of a rectangle are congruent.

   C. Congruent parts of congruent figures are corresponding.

   D. Corresponding parts of congruent figures are congruent.

2. Triangle FGH is the image of isosceles triangle FEH after a reflection across line HF. Select **all** the statements that are a result of corresponding parts of congruent triangles being congruent.

$\overline{FE} \cong \overline{HE}$



   A. $EFGH$ is a rectangle.

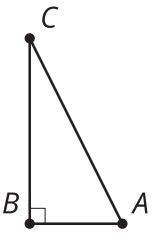
   B. $EFGH$ has 4 congruent sides.

   C. Diagonal FH bisects angles EFG and EHG.

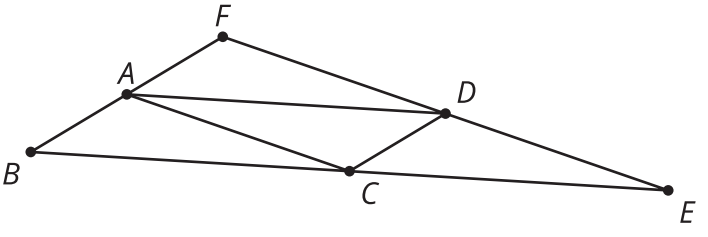
   D. Diagonal FH is perpendicular to side FE.

   E. Angle FEH is congruent to angle FGH.

3. Reflect right triangle ABC across line BC. Classify triangle ACA' according to its side lengths. Explain how you know.



4. Triangles FAD and DCE are translations of triangle ABC



Select **all** the statements that *must* be true.

A. Points B, A, and F are collinear.

B. The measure of angle BCA is the same as the measure of angle CED.

C. Line AD is parallel to line BC.

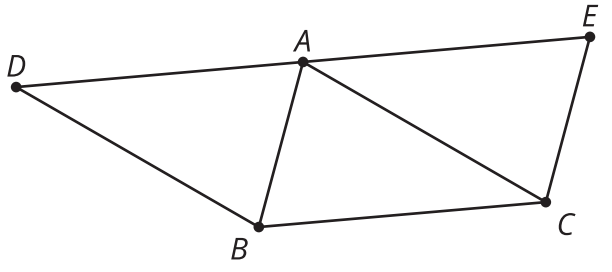
D. The measure of angle CED is the same as the measure of angle FAD.

E. The measure of angle DAC is the same as the measure of angle BCA.

F. Triangle ADC is a reflection of triangle FAD.

(From Unit 1, Lesson 21.)

5. Triangle ABC is congruent to triangles BAD and CEA.



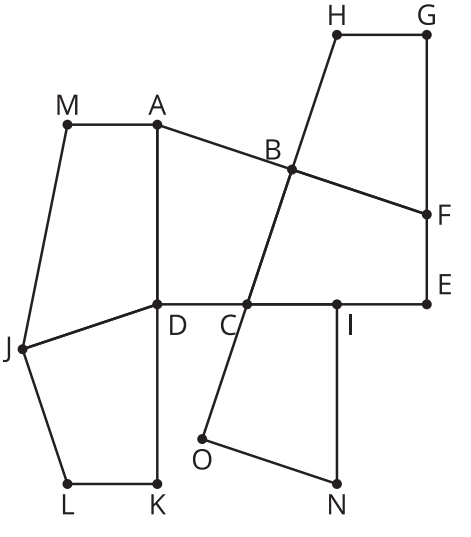
a. Explain why points D, A, and E are collinear.

b. Explain why line DE is parallel to line BC.

(From Unit 1, Lesson 21.)

6. a. Identify a figure that is the result of a rigid transformation of quadrilateral $ABCD$.

b. Describe a rigid transformation that would take $ABCD$ to that figure.



(From Unit 1, Lesson 18.)