

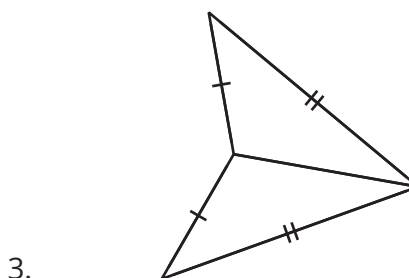
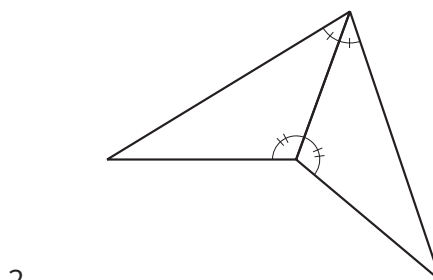
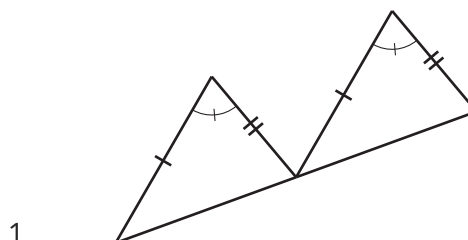
Lesson 4 Practice Problems

1. Match each statement using only the information shown in the pairs of congruent triangles.

A. In the 2 triangles there are 3 pairs of congruent sides.

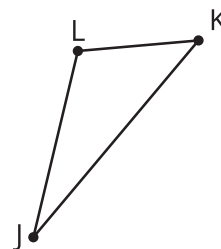
B. The 2 sides and the included angle of one triangle are congruent to 2 sides and the included angle of another triangle.

C. The 2 angles and the included side of one triangle are congruent to 2 angles and the included side of another triangle.

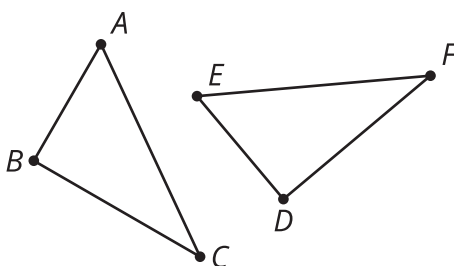


2. Sketch the unique triangles that can be made with angle measures 40° and 100° and side length 3. How do you know you have sketched all possibilities?

3. What is the least amount of information that you need to construct a triangle congruent to this one?



4. Triangle ABC is congruent to triangle EDF . So, Mai knows that there is a sequence of rigid motions that takes ABC to EDF .

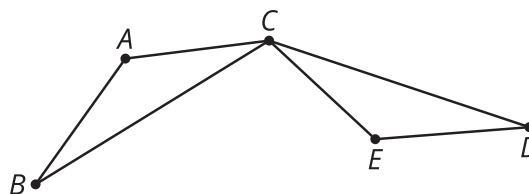


Select **all** true statements after the transformations:

- A. Angle A coincides with angle E .
- B. Angle B coincides with angle F .
- C. Segment AB coincides with segment EF .
- D. Segment BC coincides with segment DF .
- E. Segment AC coincides with segment ED .

(From Unit 2, Lesson 3.)

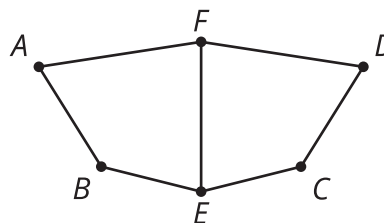
5. A rotation by angle ACE using point C as the center takes triangle CBA onto triangle CDE .



- Explain why the image of segment CB lines up with segment CD .
- Explain why the image of B coincides with D .
- Is triangle ABC congruent to triangle EDC ? Explain your reasoning.

(From Unit 2, Lesson 3.)

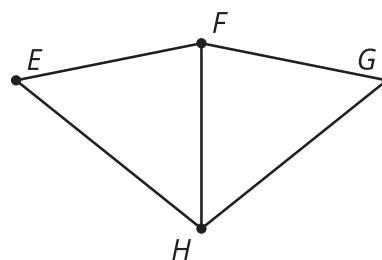
6. Line EF is a line of symmetry for figure $ABECDF$. Clare says that $ABEF$ is congruent to $CDFE$ because sides AB and CD are corresponding.



- Why is Clare's congruence statement incorrect?
- Write a correct congruence statement for the quadrilaterals.

(From Unit 2, Lesson 2.)

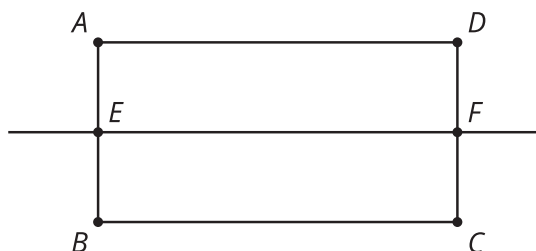
7. Triangle HEF is the image of triangle HGF after a reflection across line FH . Select **all** statements that must be true.



- A. Triangle FGH is congruent to triangle FEH .
- B. Triangle EFH is congruent to triangle GFH .
- C. Angle HFE is congruent to angle FHG .
- D. Angle EFG is congruent to angle EHG .
- E. Segment EH is congruent to segment FG .
- F. Segment GH is congruent to segment EH .

(From Unit 2, Lesson 2.)

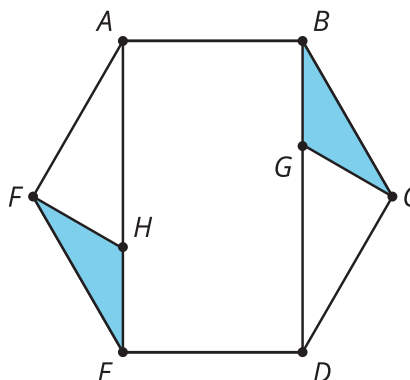
8. When rectangle $ABCD$ is reflected across line EF , the image is $BADC$. How do you know that segment AD is congruent to segment BC ?



- A. A rectangle has 2 pairs of parallel sides.
- B. Any 2 sides of a rectangle are congruent.
- C. Corresponding parts of congruent figures are congruent.
- D. Congruent parts of congruent figures are corresponding.

(From Unit 2, Lesson 1.)

9. This design began from the construction of a regular hexagon. Describe a rigid motion that will take the figure onto itself.



(From Unit 1, Lesson 22.)