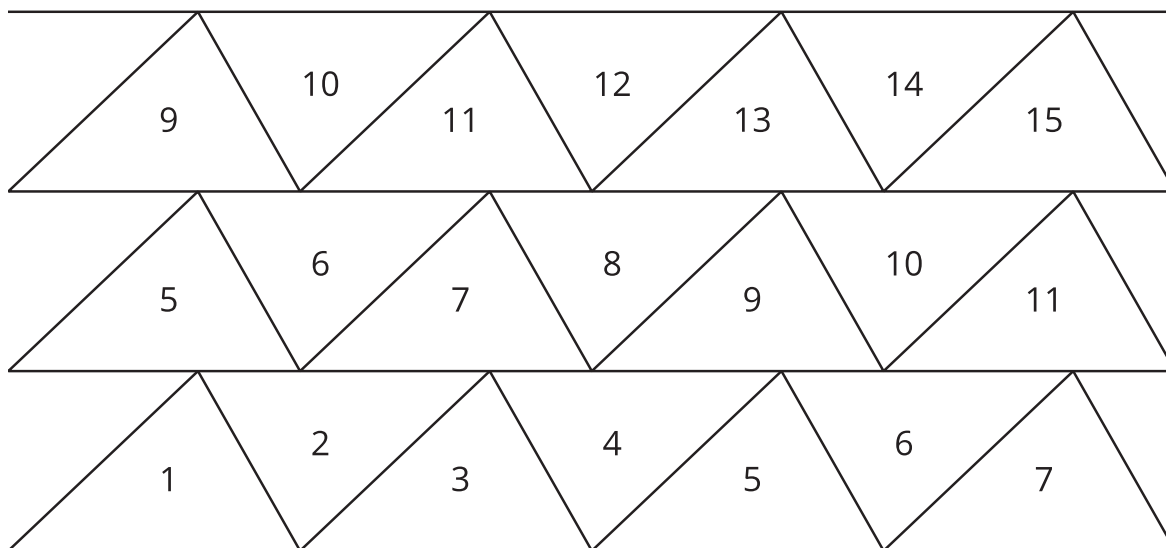


Lesson 21 Practice Problems

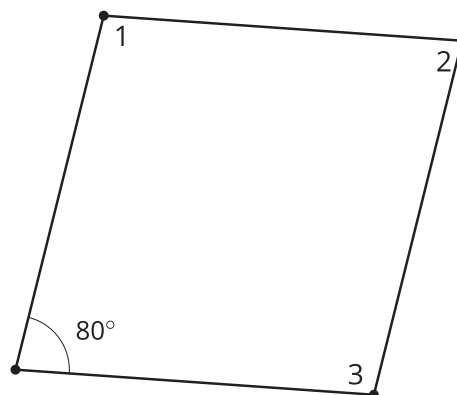
1. The triangles here are each obtained by applying rigid motions to triangle 1.



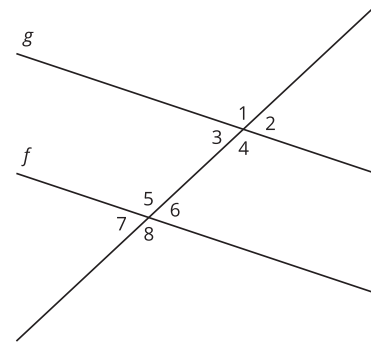
a. Which triangles are translations of triangle 1? Explain how you know.

b. Which triangles are not translations of triangle 1? Explain how you know.

2. The quadrilateral is a parallelogram.
Find the measure of angles 1, 2, and 3.



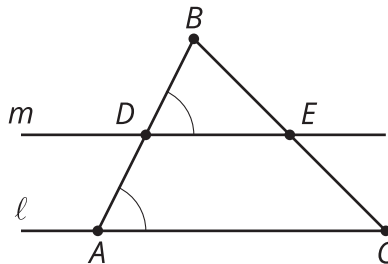
3. In the figure shown, lines f and g are parallel. Select the angle that is congruent to angle 1.



- A. Angle 2
- B. Angle 6
- C. Angle 7
- D. Angle 8

(From Unit 1, Lesson 20.)

4. Angle BDE is congruent to angle BAC . Name another pair of congruent angles. Explain how you know.



(From Unit 1, Lesson 20.)

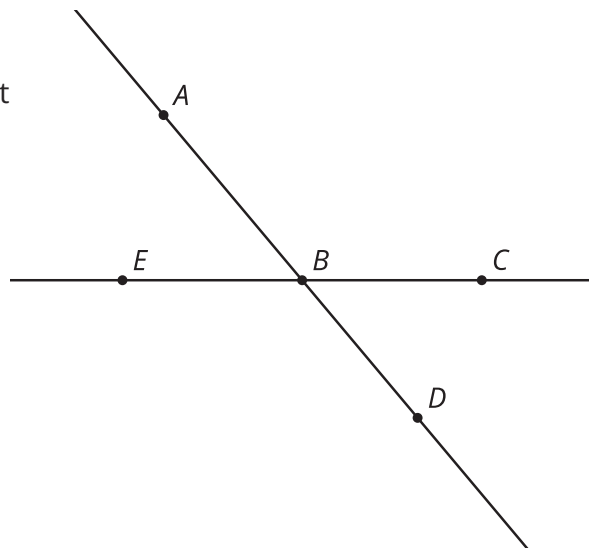
5.
 - a. Describe a transformation that could be used to show that corresponding angles are congruent.

 - b. Describe a transformation that could be used to show that alternate interior angles are congruent.

(From Unit 1, Lesson 20.)

6. Lines AD and EC meet at point B .

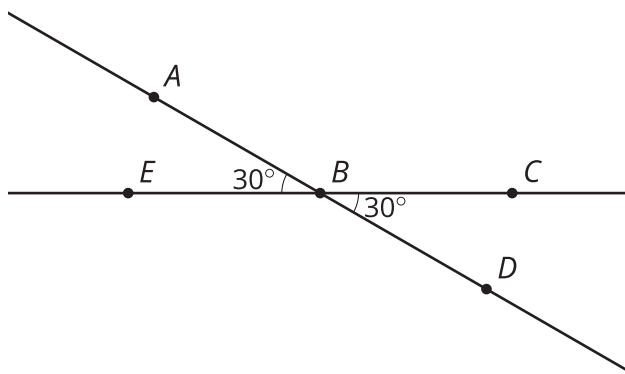
Which of these *must* be true? Select all that apply.



- A. A 180 degree clockwise rotation using center B takes D to A .
- B. The image of D after a 180 degree rotation using center B lies on ray BA .
- C. If a 180 degree rotation using center B takes C to E then it also takes E to C .
- D. Angle ABC is congruent to angle DBE .
- E. Angle ABE is congruent to angle ABC .

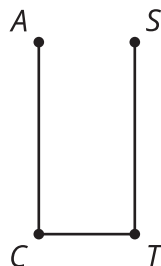
(From Unit 1, Lesson 19.)

7. Points E , B , and C are collinear. Explain why points A , B , and D are collinear.



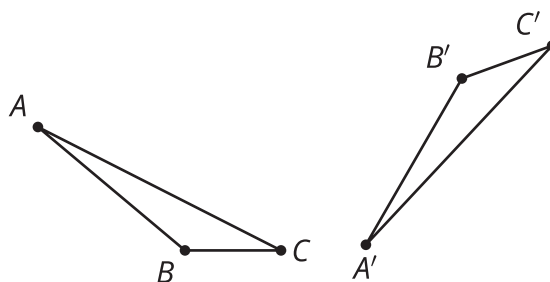
(From Unit 1, Lesson 19.)

8. a. Draw the image of figure $ACTS$ after a clockwise rotation around point C using angle CTS and then a translation by the directed line segment CT .
- b. Describe another sequence of transformations that will result in the same image.



(From Unit 1, Lesson 18.)

9. Triangle ABC is congruent to triangle $A'B'C'$. Describe a sequence of rigid motions that takes A to A' , B to B' , and C to C' .



(From Unit 1, Lesson 17.)