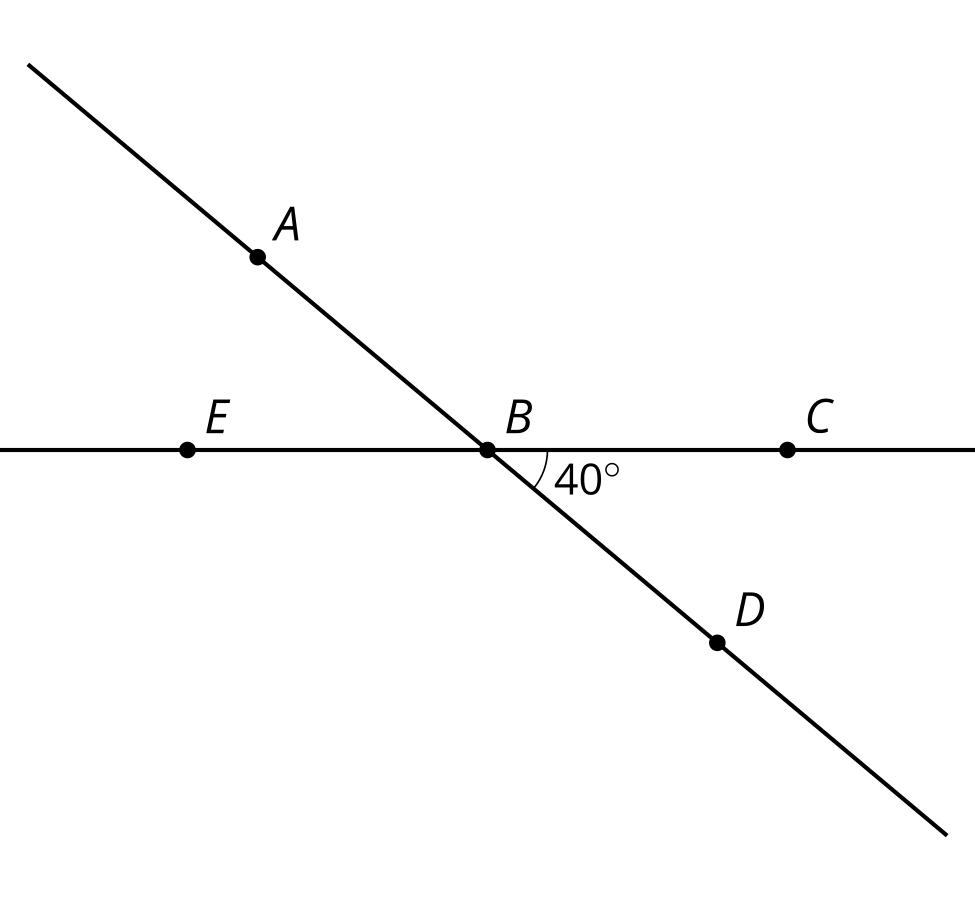
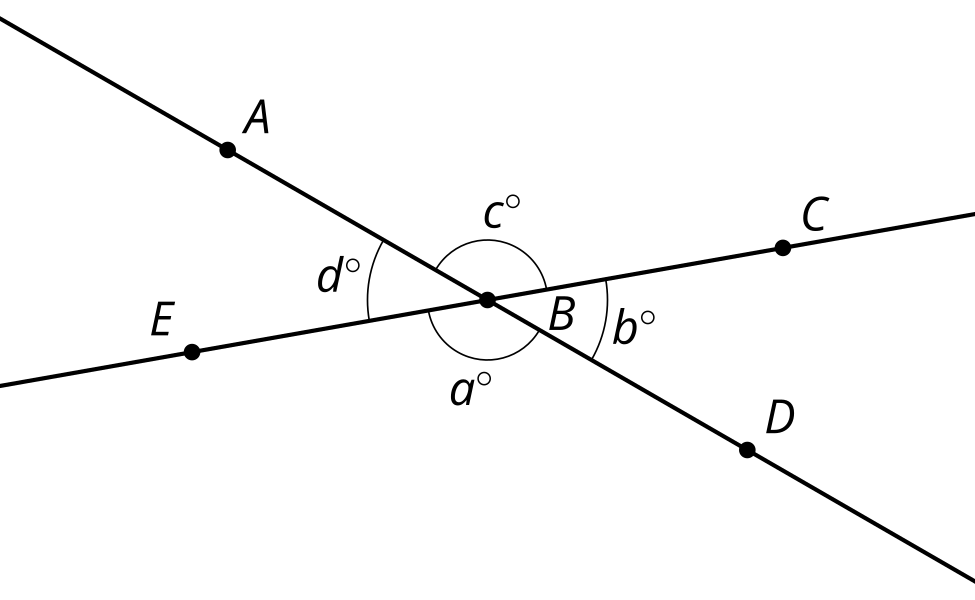
### Lesson 19 Practice Problems

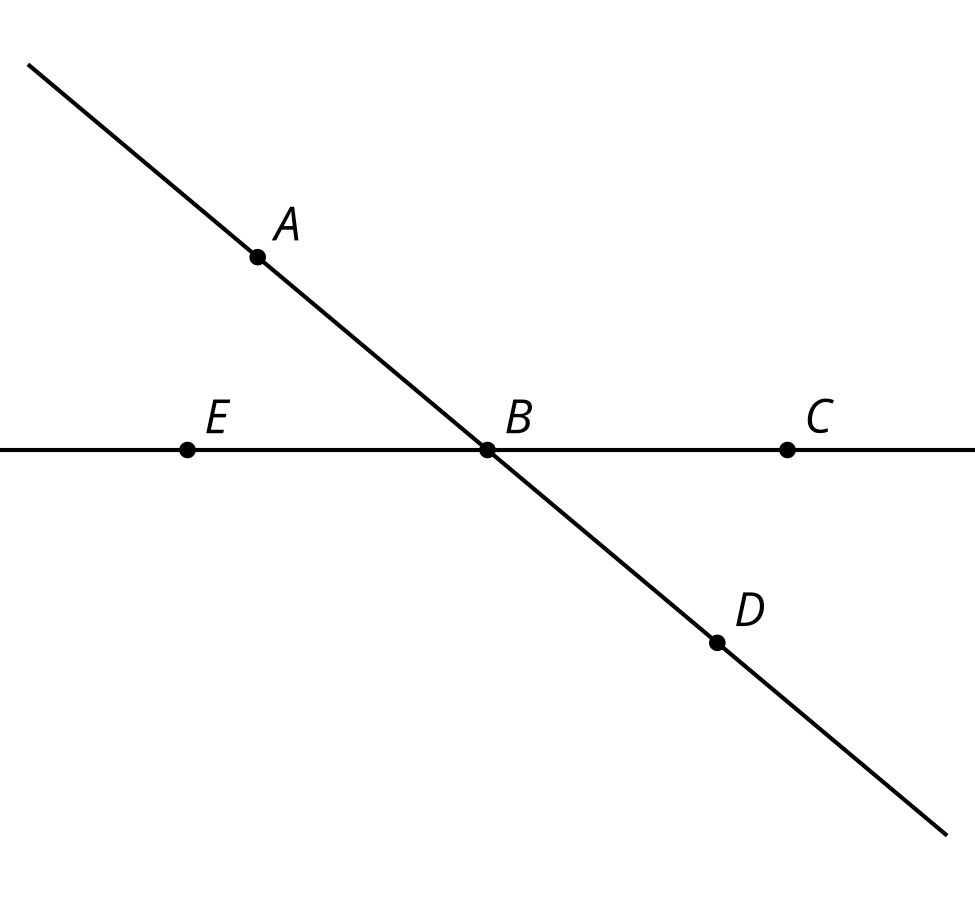
1. What is the measure of angle ?

* 

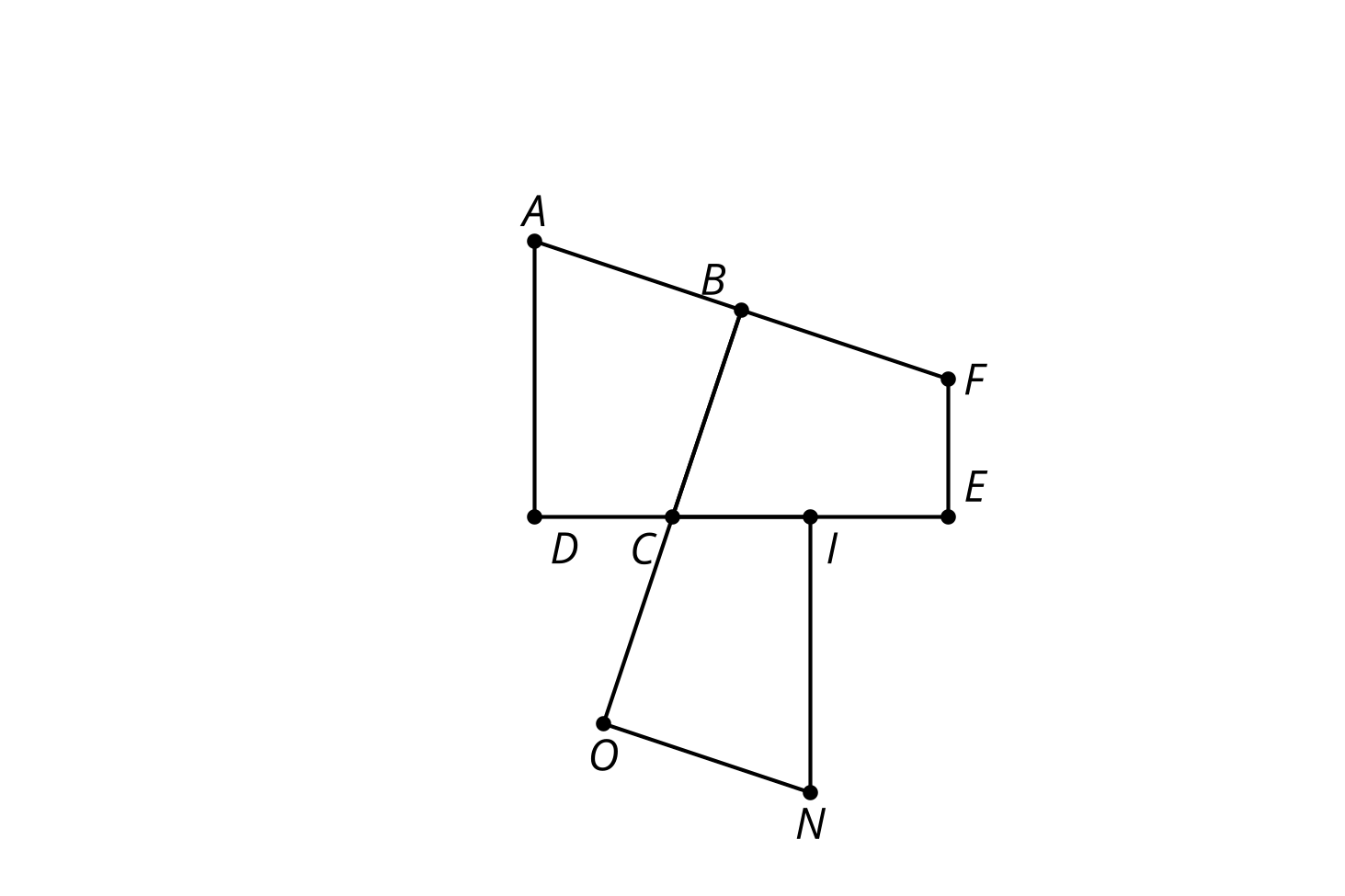
1. Select **all** true statements about the figure.

* 
  1. Rotate clockwise by angle using center . Then angle is the image of angle .
  2. Rotate 180 degrees using center . Then angle is the image of angle .
  3. Reflect across the angle bisector of angle . Then angle is the image of angle .
  4. Reflect across line . Then angle is the image of angle

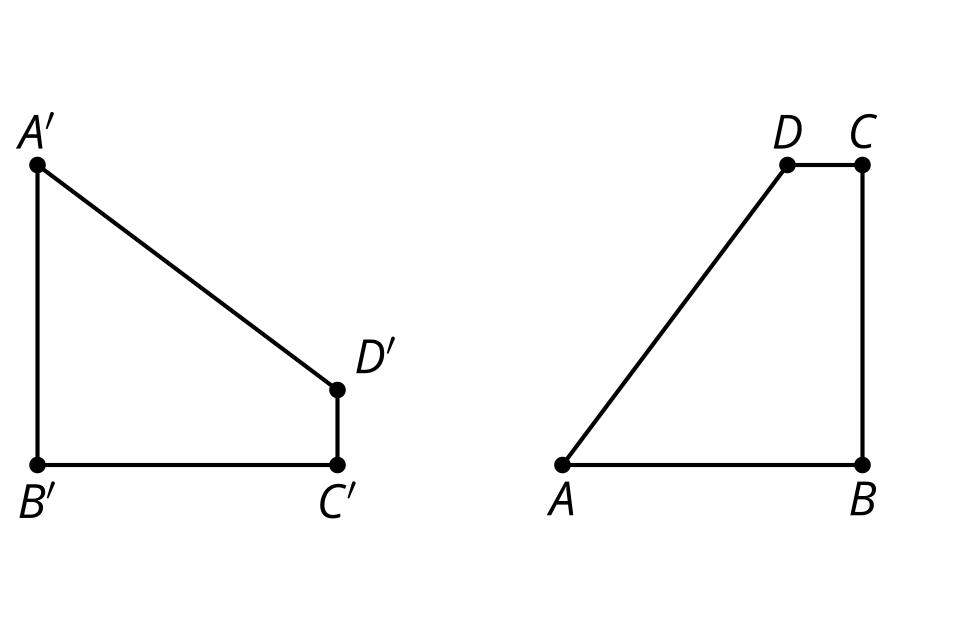
1. Point is rotated 180 degrees using as the center. Explain why the image of must lie on the ray .

* 

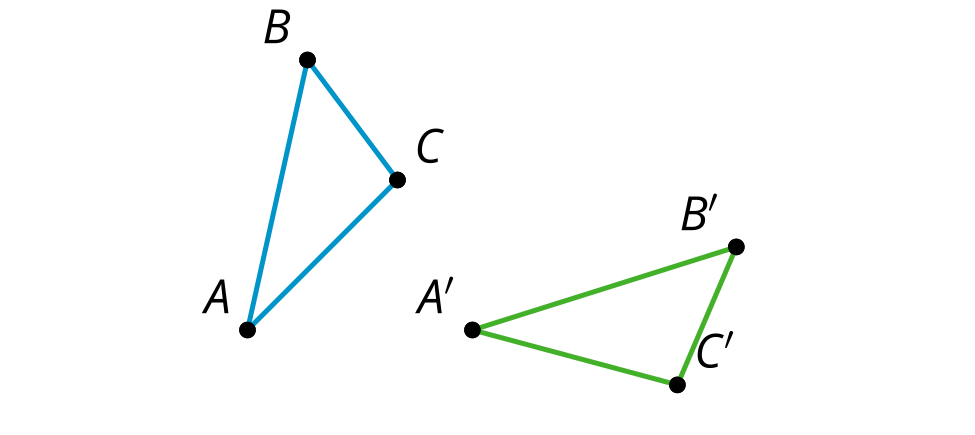
1. Draw the result of this sequence of transformations.
   1. Rotate clockwise by angle using point as the center.
   2. Translate the image by the directed line segment .

* 
* (From Unit 1, Lesson 18.)

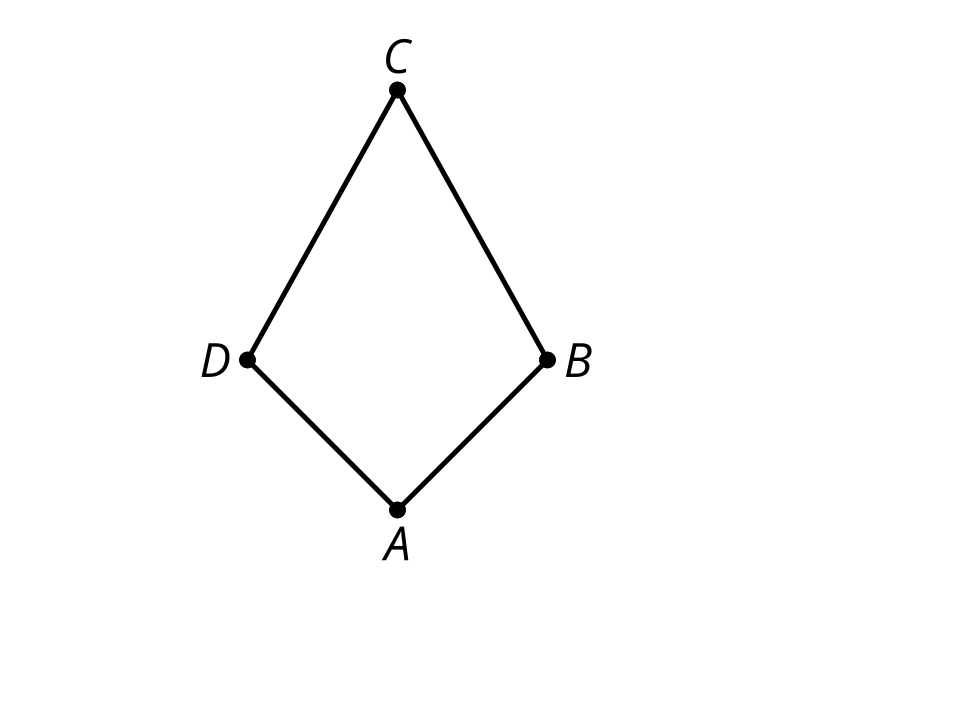
1. Quadrilateral is congruent to quadrilateral . Describe a sequence of rigid motions that takes to , to , to , and to .

* 
* (From Unit 1, Lesson 17.)

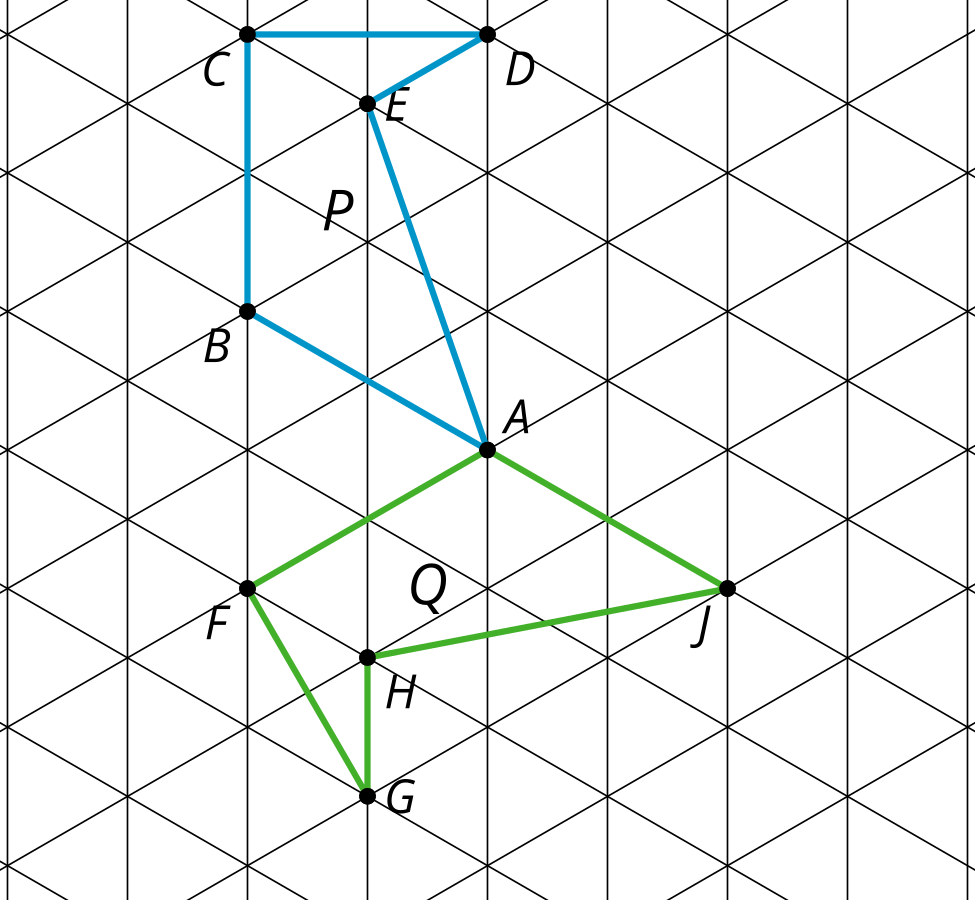
1. Triangle is congruent to triangle . Describe a sequence of rigid motions that takes to , to , and to .

* 
* (From Unit 1, Lesson 17.)

1. In quadrilateral , and . The line is a line of symmetry for this quadrilateral.

* 
  1. Based on the line of symmetry, explain why the diagonals and are perpendicular.
  2. Based on the line of symmetry, explain why angles and have the same measure.
* (From Unit 1, Lesson 15.)

1. Here are 2 polygons:

* 
* Select **all** sequences of translations, rotations, and reflections below that would take polygon to polygon .
  1. Reflect over line and then translate by directed line segment .
  2. Translate by directed line segment then reflect over line .
  3. Rotate clockwise around point and then translate by directed line segment .
  4. Translate so that is taken to . Then rotate clockwise around point .
  5. Translate so that is taken to . Then reflect over line .
* (From Unit 1, Lesson 13.)



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