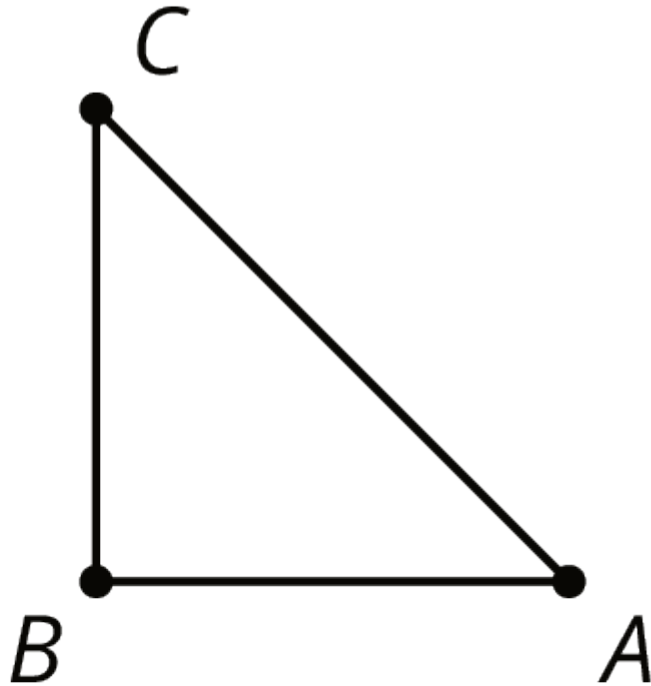


Unit 1 Lesson 8: Rotation Patterns

1 Building a Quadrilateral (Warm up)

Student Task Statement

Here is a right isosceles triangle:

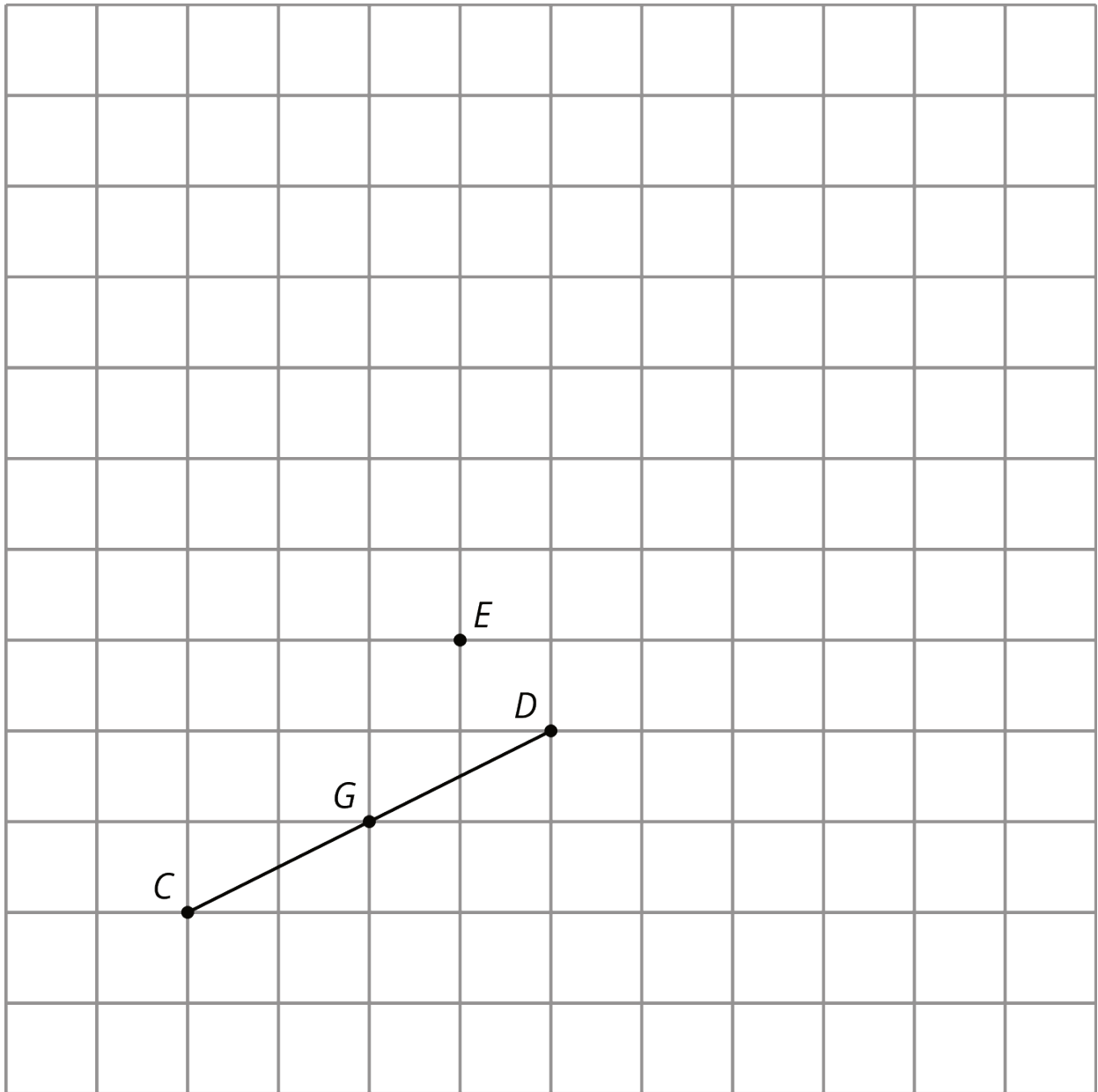


1. Rotate triangle ABC 90 degrees clockwise around B .
2. Rotate triangle ABC 180 degrees clockwise round B .

3. Rotate triangle ABC 270 degrees clockwise around B .
4. What would it look like when you rotate the four triangles 90 degrees clockwise around B ? 180 degrees? 270 degrees clockwise?

2 Rotating a Segment

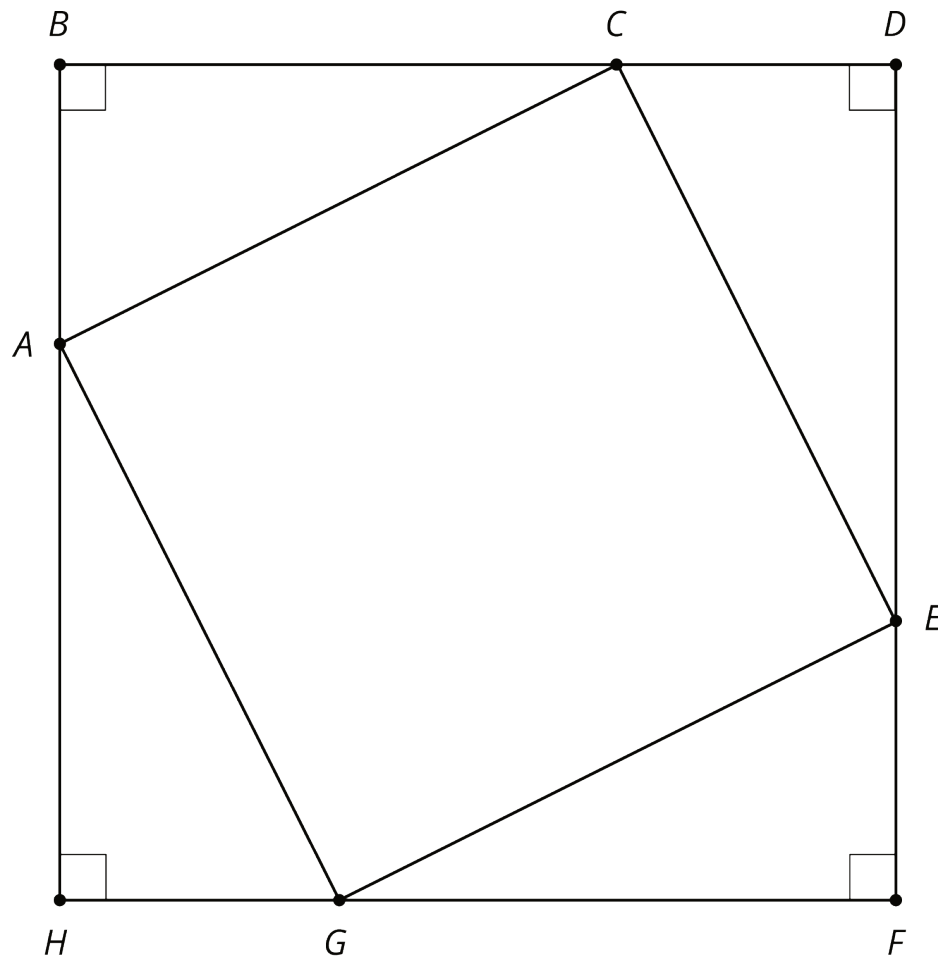
Student Task Statement



1. Rotate segment CD 180 degrees around point D . Draw its image and label the image of C as A .
2. Rotate segment CD 180 degrees around point E . Draw its image and label the image of C as B and the image of D as F .
3. Rotate segment CD 180 degrees around its midpoint, G . What is the image of C ?
4. What happens when you rotate a segment 180 degrees around a point?

3 A Pattern of Four Triangles

Student Task Statement



You can use rigid transformations of a figure to make patterns. Here is a diagram built with three different transformations of triangle ABC .

1. Describe a rigid transformation that takes triangle ABC to triangle CDE .
2. Describe a rigid transformation that takes triangle ABC to triangle EFG .
3. Describe a rigid transformation that takes triangle ABC to triangle GHA .
4. Do segments AC , CE , EG , and GA all have the same length? Explain your reasoning.