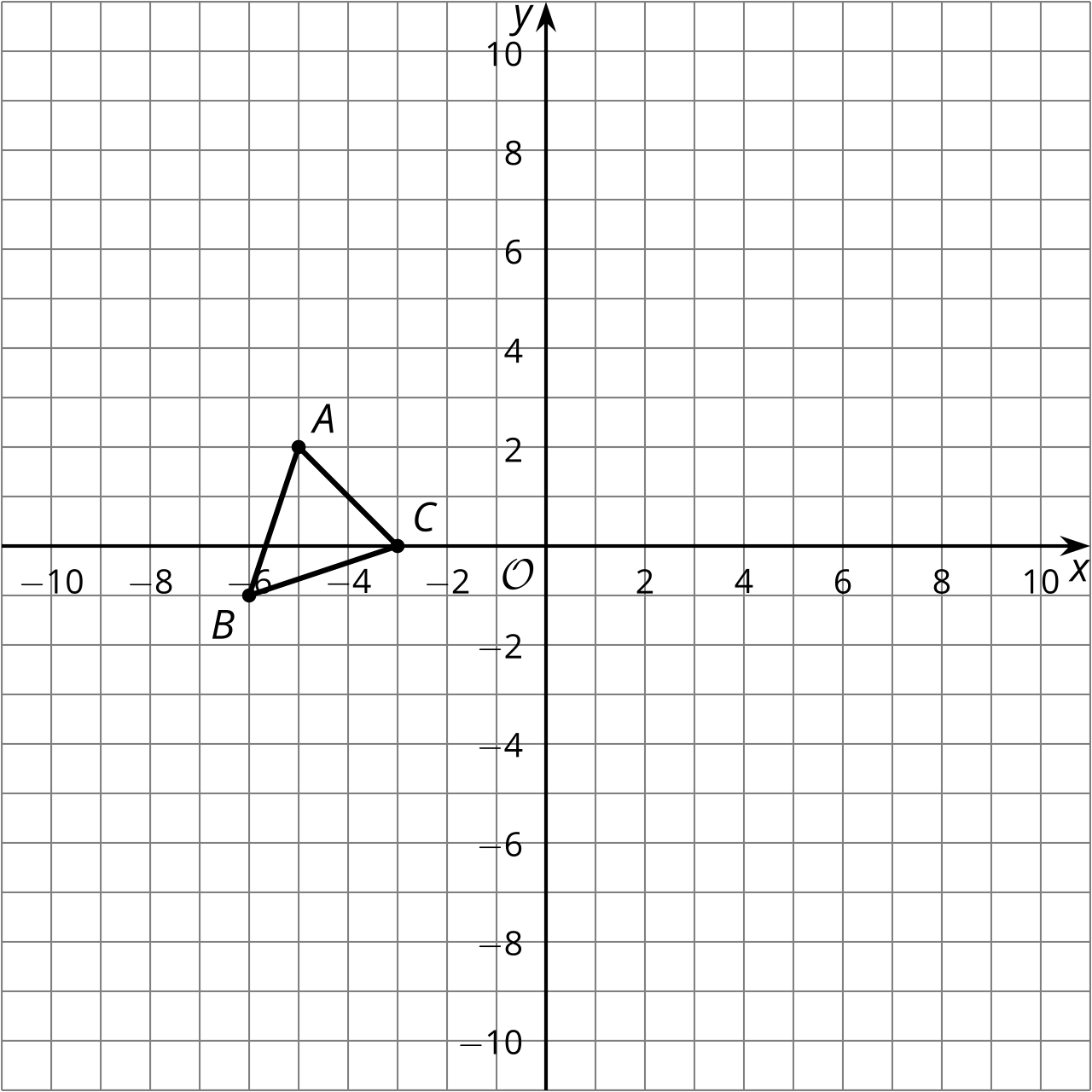
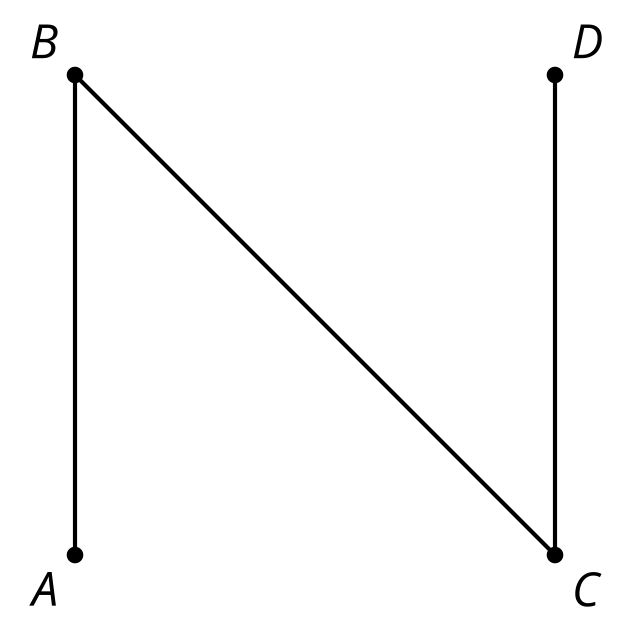
### Lesson 1 Practice Problems

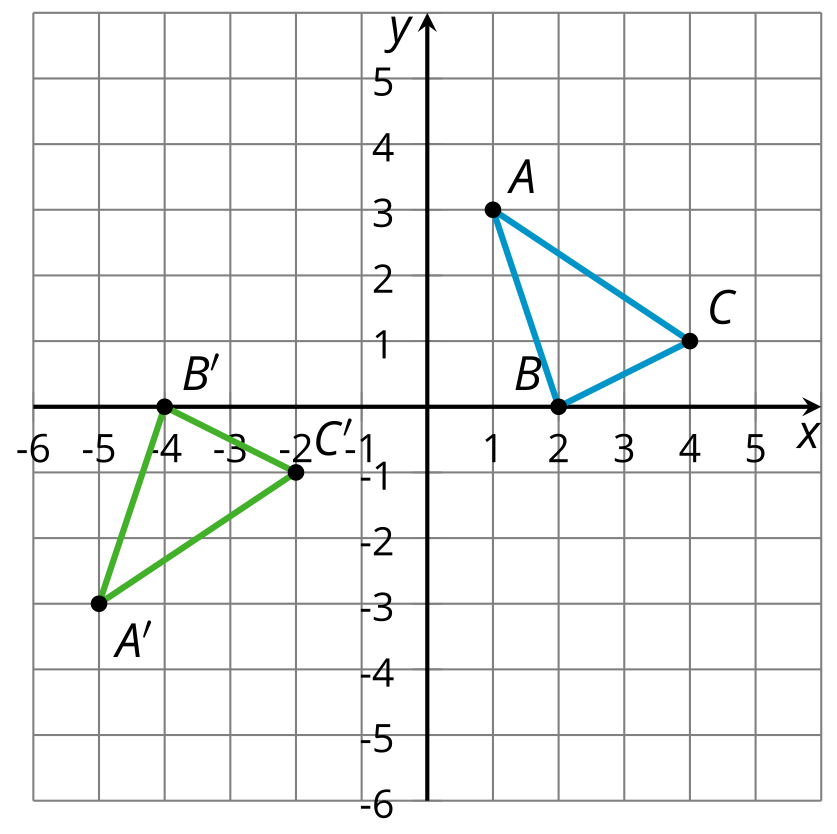
1. Reflect triangle over the line .

* Translate the image by the directed line segment from to .
* What are the coordinates of the vertices in the final image?
* 

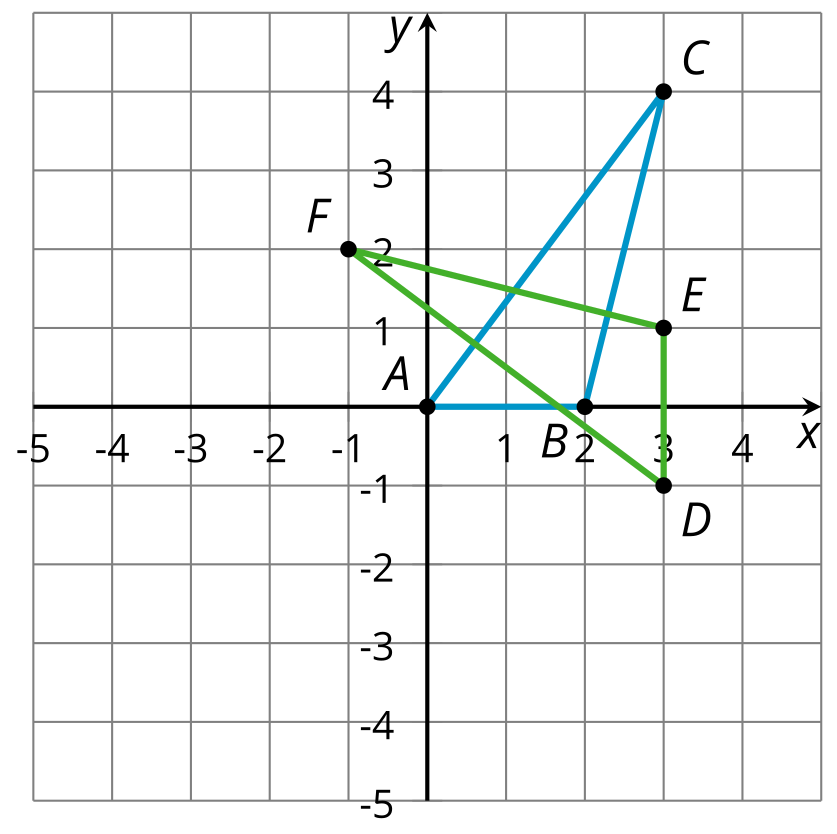
1. Three line segments form the letter N. Rotate the letter N counterclockwise around the midpoint of segment by 180 degrees. Describe the result.

* 
* (From Unit 1, Lesson 14.)

1. Triangle has coordinates and The image of this triangle after a sequence of transformations is triangle where and

* Write a sequence of transformations that takes triangle to triangle .
* 

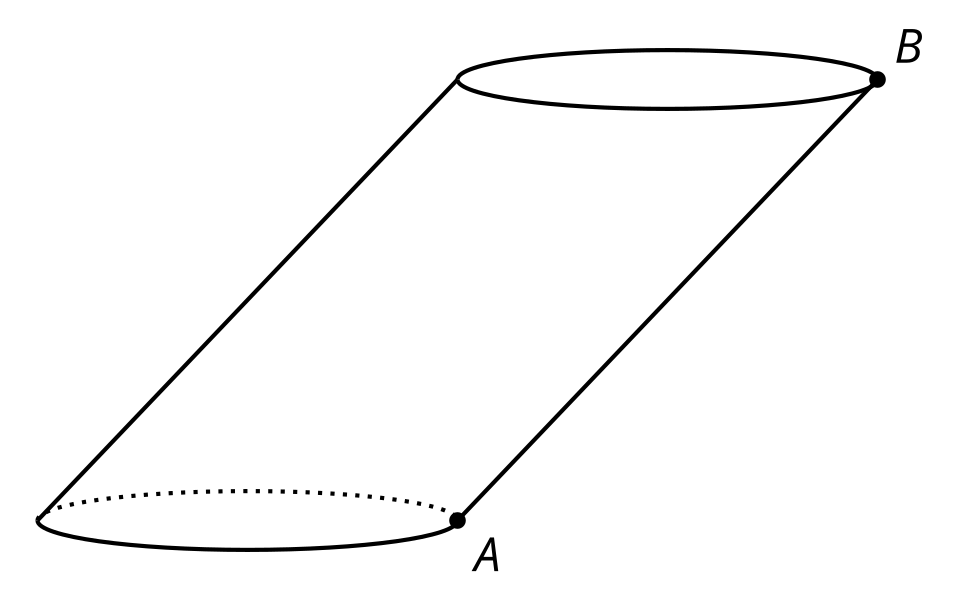
1. Prove triangle is congruent to triangle .

* 

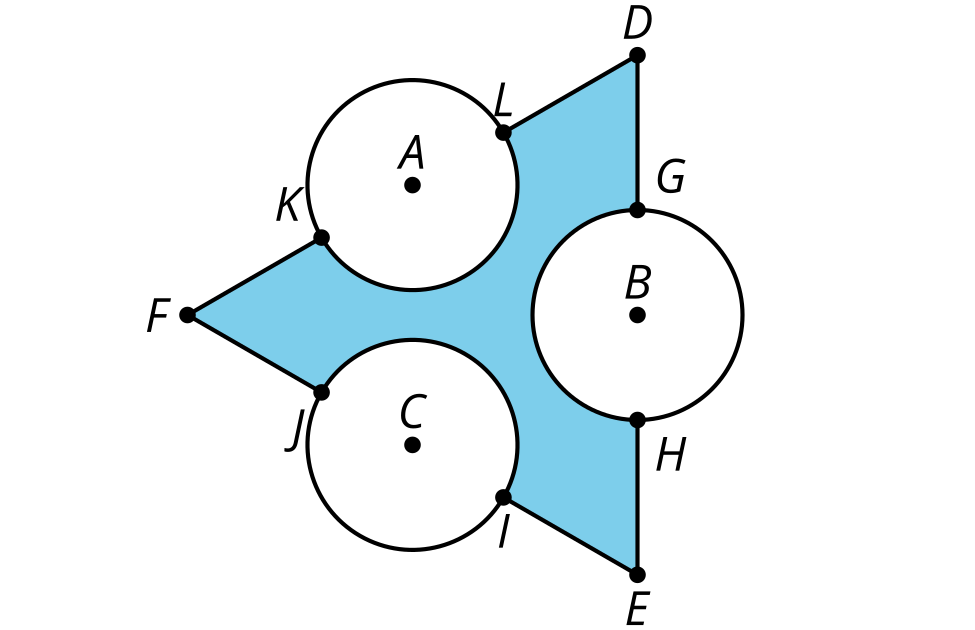
1. The density of water is 1 gram per cm3. An object floats in water if its density is less than water’s density, and it sinks if its density is greater than water’s. Will a 1.17 gram diamond in the shape of a pyramid whose base has area 2 cm2 and whose height is 0.5 centimeters sink or float? Explain your reasoning.

* (From Unit 5, Lesson 17.)

1. *Technology required*. An oblique cylinder with a base of radius 2 units is shown. The top of the cylinder can be obtained by translating the base by the directed line segment which has length 16 units. The segment forms a angle with the plane of the base. What is the volume of the cylinder?

* 
* (From Unit 5, Lesson 11.)

1. This design began from the construction of an equilateral triangle. Record at least 3 rigid transformations (rotation, reflection, translation) you see in the design.

* 
* (From Unit 1, Lesson 22.)



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