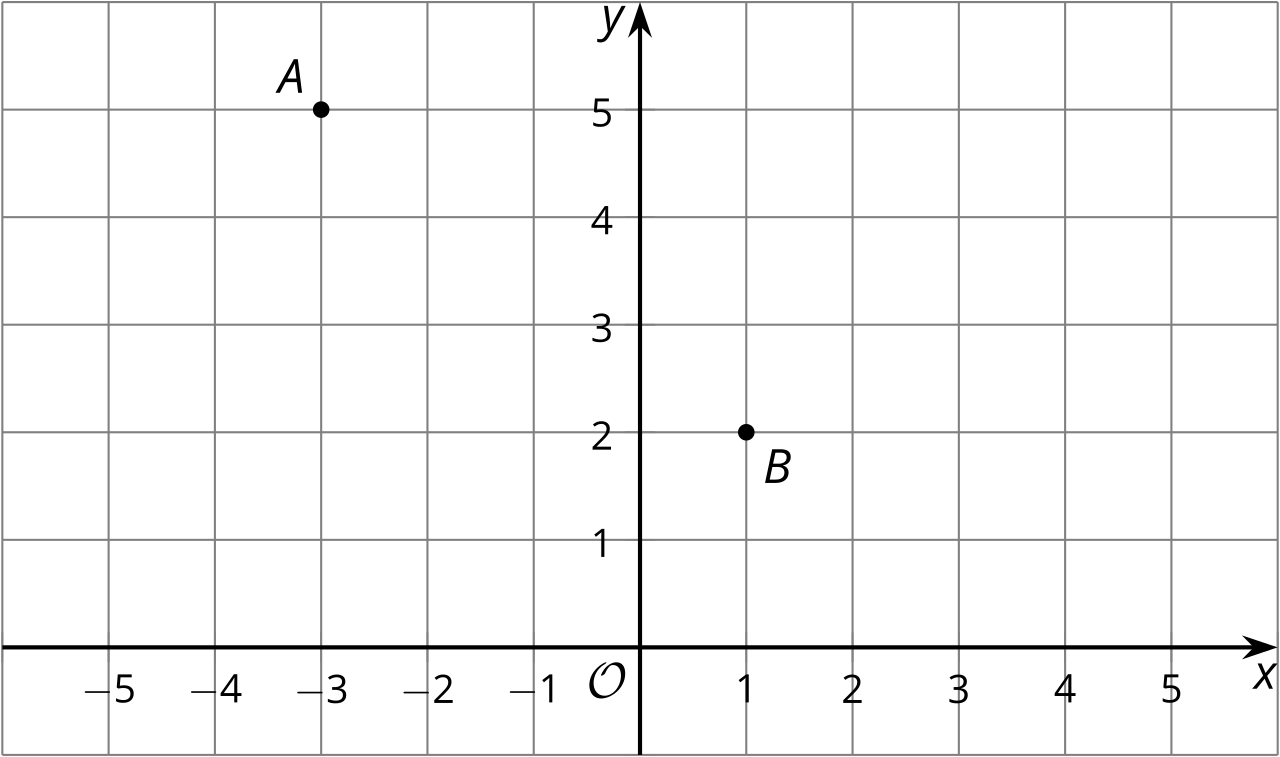
## Unit 6 Lesson 1: Rigid Transformations in the Plane

### 1 Traversing the Plane (Warm up)

#### Student Task Statement

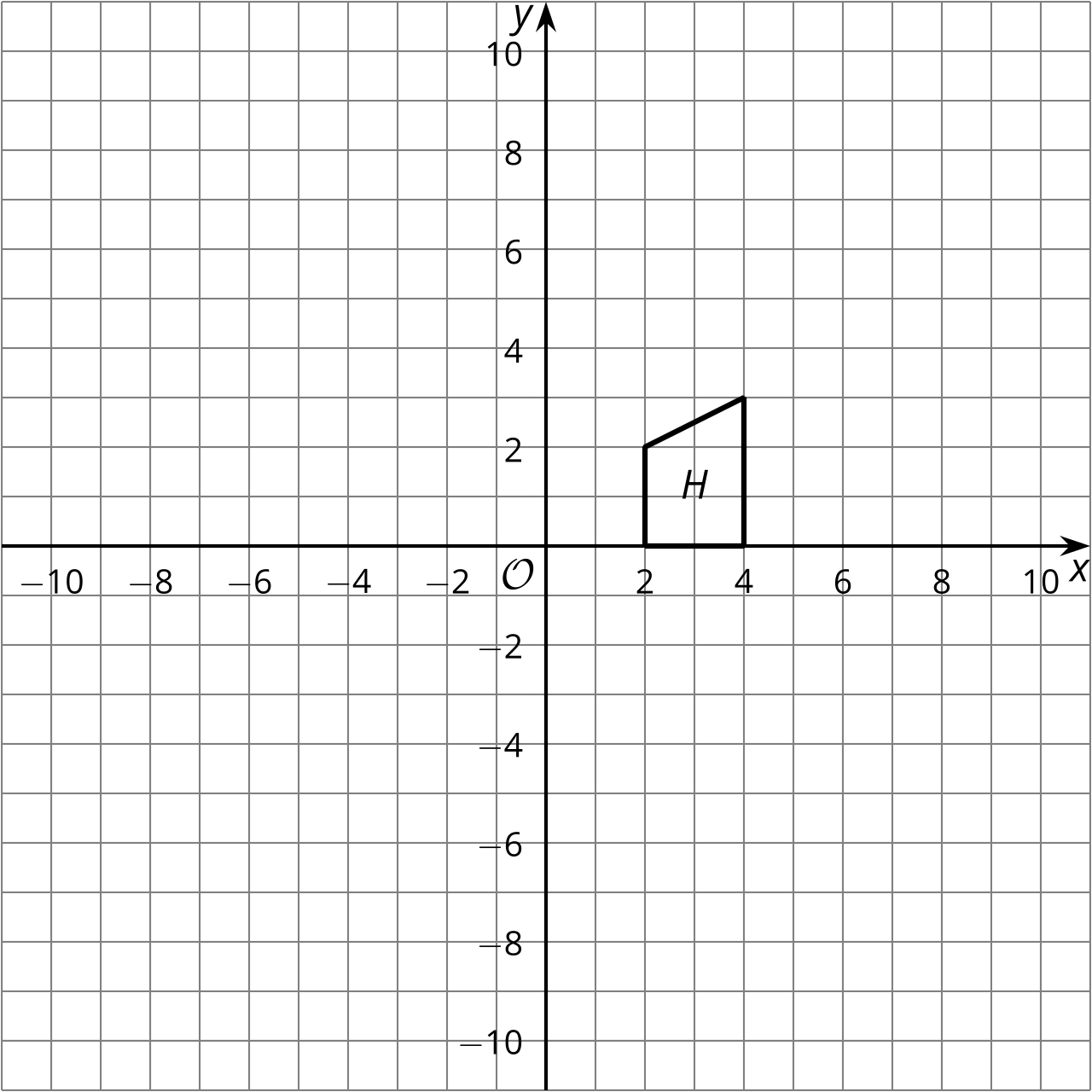


1. How far is point from point ?
2. What transformations will take point to point ?

### 2 Transforming with Coordinates

#### Student Task Statement

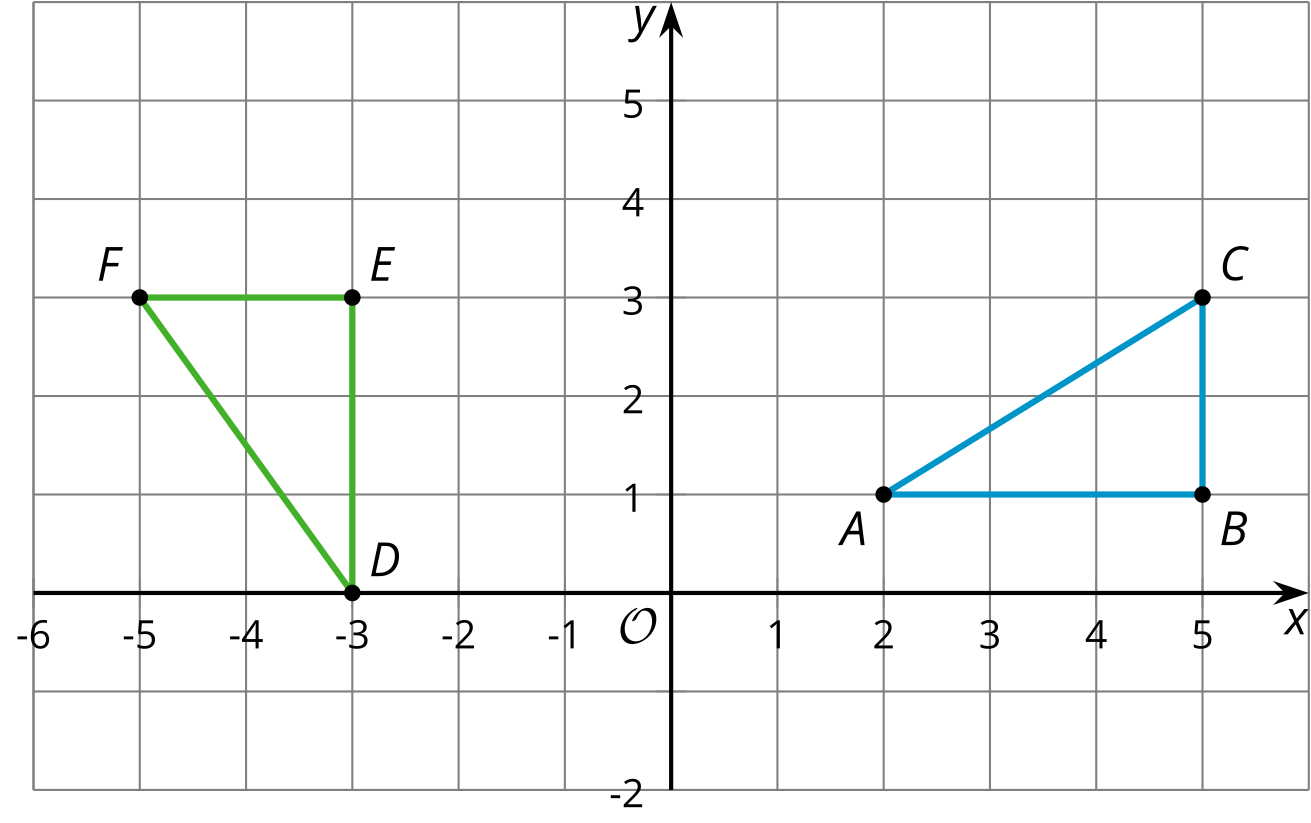
First, predict where each transformation will land. Next, carry out the transformation.



1. Rotate Figure clockwise using center by 90 degrees.  
   Translate the image by the directed line segment from to .  
   Label the result .
2. Reflect Figure across the -axis.  
   Rotate the image counterclockwise using center by 90 degrees.  
   Label the result .

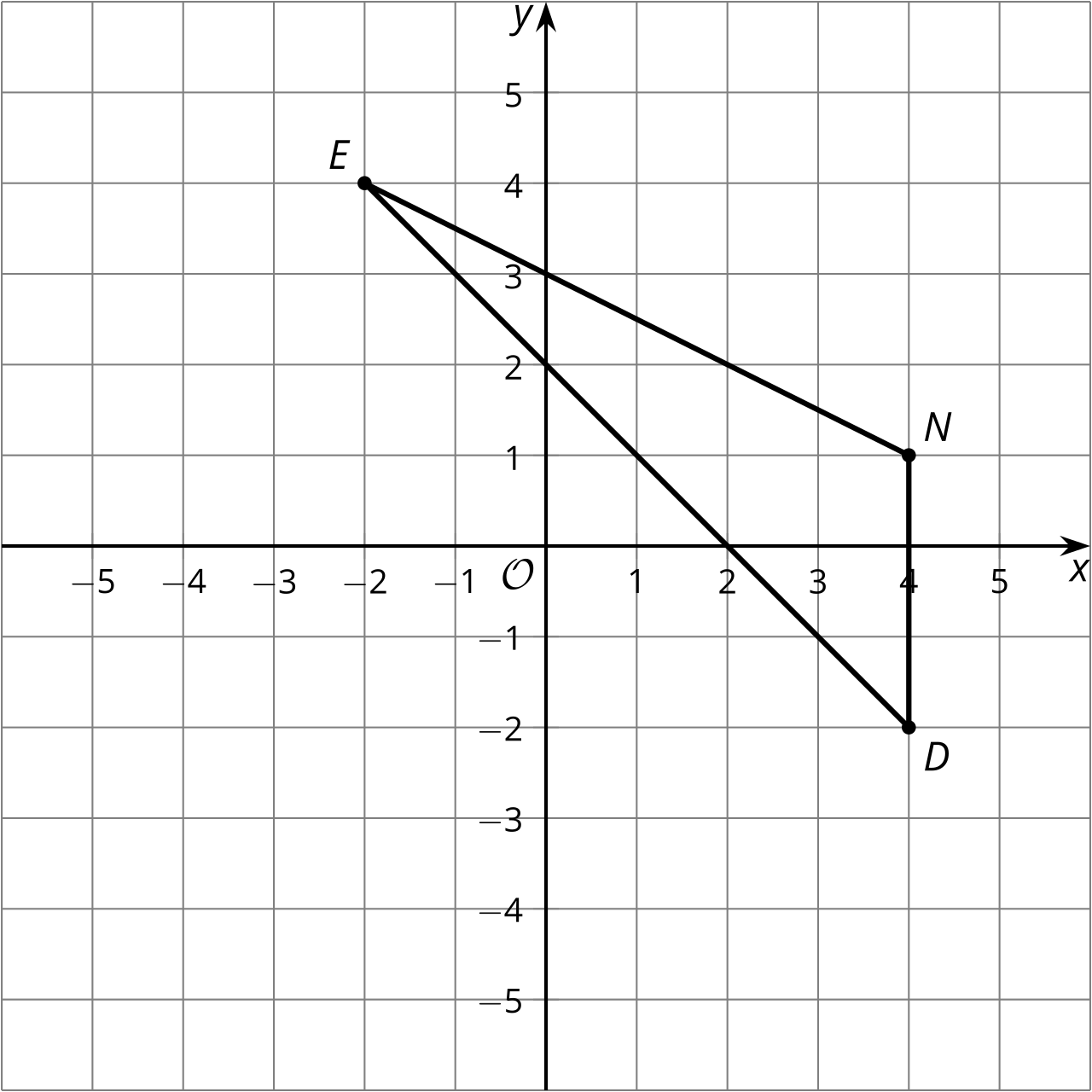
### 3 Congruent by Coordinates

#### Student Task Statement



1. Calculate the length of each side in triangles and .
2. Calculate the measure of each angle in triangles and .
3. The triangles are congruent. How do you know this is true?
4. Because the triangles are congruent, there must be a sequence of rigid motions that takes one to the other. Find a sequence of rigid motions that takes triangle to triangle .

#### Images for Activity Synthesis





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