

M152: Reasoning and Proof Through Congruence

Pre-Badge Task

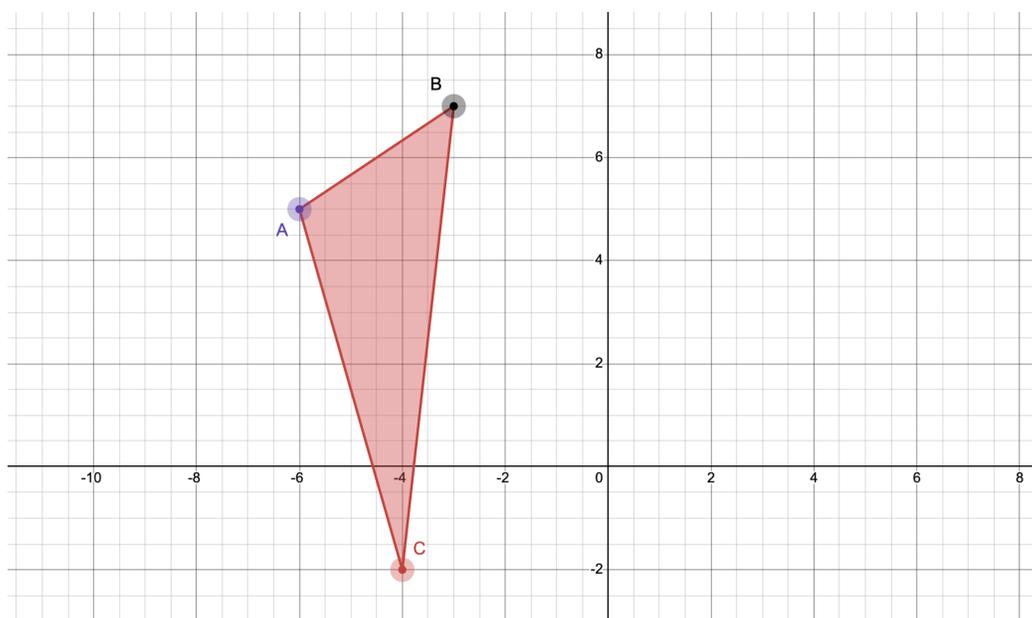
New Badge Alert!

This task will provide a preview of what we will be learning during the M152 - Reasoning and Proof Through Congruence Badge. You already know so much math, so use this task to share any understanding that you have before we start our learning. You will have a chance to do the same task at the end of the badge to see how your thinking has evolved.

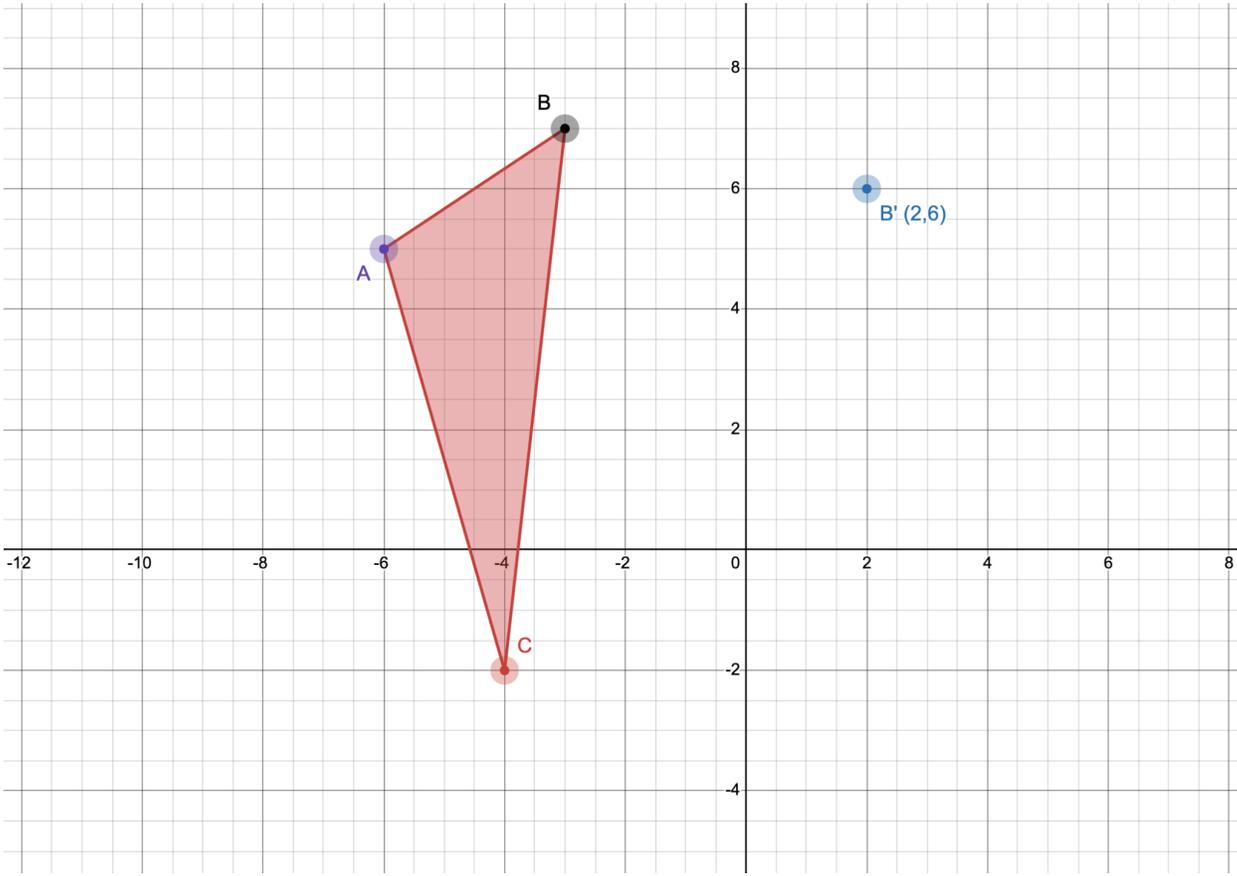
The Task

Respond to the four questions in this task about Triangle ABC.

QUESTION 1 What are the coordinates of Point A, Point B and Point C? Label the coordinates next to each point on the graph.

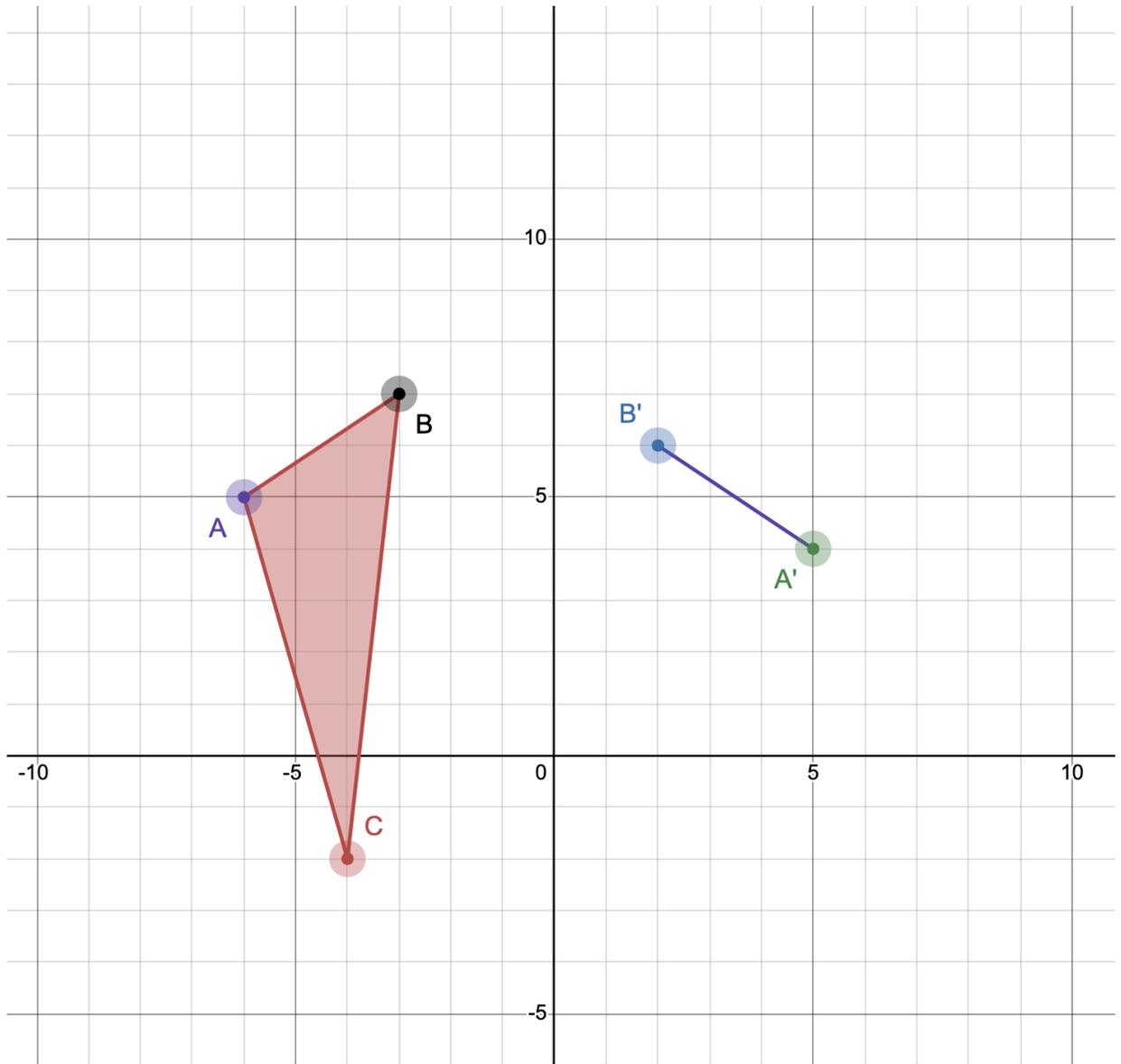


QUESTION 2 Draw Triangle A'B'C' congruent to Triangle ABC such that Point B' is the image of Point B. Label the coordinates of A' and C'.



QUESTION 3

- (a) Draw a point C' such that Triangle ABC is congruent to Triangle $A'B'C'$.
- (b) If possible, draw another point to create a new triangle that is congruent to Triangle ABC such that $A'B'$ is still one of its sides. Otherwise, write below the grid "There is no other point."



QUESTION 4 Nolan claims that he created Triangle EDC congruent to Triangle ABC. Amber does not believe the two triangles are congruent. Choose whether you will take the perspective of Nolan or Amber. If you choose to be Nolan, you will explain to Amber why you are certain that the two triangles are congruent. If you choose to be Amber, you will help Nolan understand what changes need to be made to ensure that the two triangles are congruent. Have fun!

