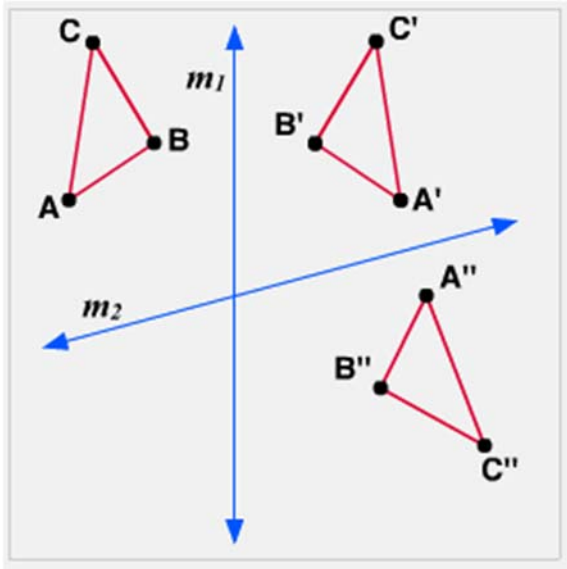


Hint: You may want to read through the “Reflections and rotations” section in Unit 2 in the Agile Mind site at “proviso.agilemind.com” as you do this assignment.

1. In the diagram, explain why  $\Delta A''B''C''$  is not a translation of  $\Delta ABC$ .



2. What is the definition of a *rotation*?

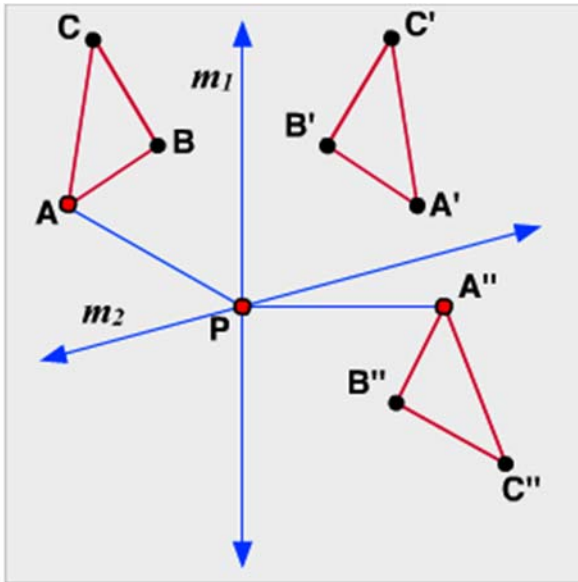
3. What is the *center of rotation*?

4. A rigid transformation preserves \_\_\_\_\_, \_\_\_\_\_,  
and \_\_\_\_\_.

5. A rotation is a composition of what?

6. If the measure of the angle of rotation is  $160^\circ$ , then the measure of the acute angle of the intersecting line is \_\_\_\_\_ degrees.

Use the diagram below to answer problems 7 and 8.



7. Assume the measure of the acute angle between  $m_1$  and  $m_2$  is  $70^\circ$ , and  $m \angle APA'' = (5x - 40)^\circ$ . Solve for  $x$ .

8. Assume  $PA = (4x + 3)$  and  $PA'' = (2x + 11)$  centimeters. Solve for  $x$ .