

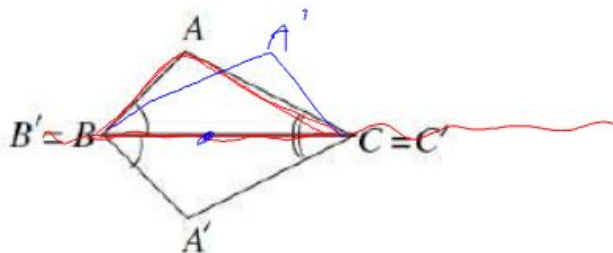
## Lesson 10: Sequences of Rigid Motions

### Classwork

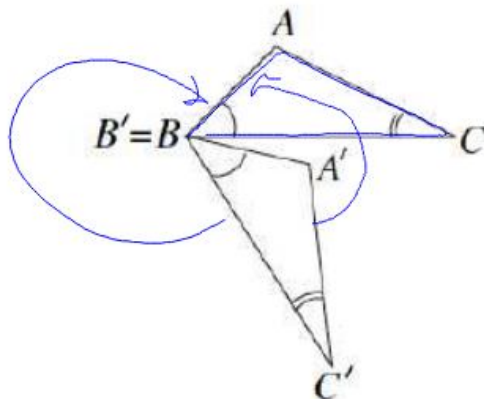
#### Exercises

- In the following picture, triangle  $ABC$  can be traced onto a transparency and mapped onto triangle  $A'B'C'$ . Which basic rigid motion, or sequence of, would map one triangle onto the other?

Reflection  
over line  $\overline{BC}$

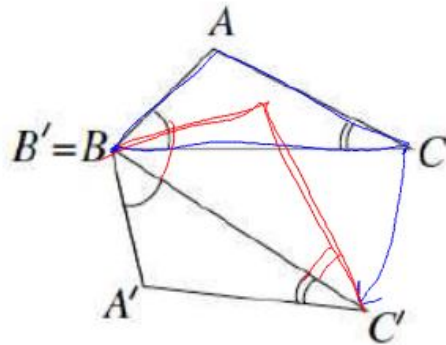


- In the following picture, triangle  $ABC$  can be traced onto a transparency and mapped onto triangle  $A'B'C'$ . Which basic rigid motion, or sequence of, would map one triangle onto the other?



Rotation around  
point  $B'$  until  
the figures match  
up.

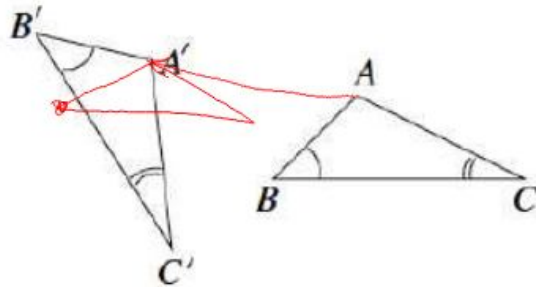
3. In the following picture, triangle  $ABC$  can be traced onto a transparency and mapped onto triangle  $A'B'C'$ . Which basic rigid motion, or sequence of, would map one triangle onto the other?



Rotate around point B until C matches up with  $C'$   
Then reflect  $\triangle ABC$  over line  $\overline{BC}$

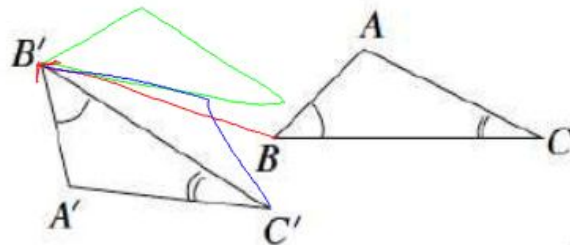
4. In the following picture, we have two pairs of triangles. In each pair, triangle  $ABC$  can be traced onto a transparency and mapped onto triangle  $A'B'C'$ . Which basic rigid motion, or sequence of, would map one triangle onto the other?

Scenario 1:



+ translate along vector  $\overrightarrow{AA'}$   
Then rotate around point A

Scenario 2:



- ① Translate along vector  $\overrightarrow{BB'}$
- ② Rotate around point  $B'$
- ③ Reflect over line  $\overline{B'C'}$