

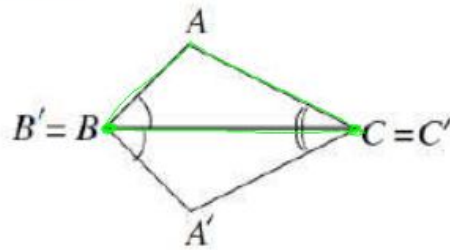
Lesson 10: Sequences of Rigid Motions

Classwork

Exercises

1. 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?

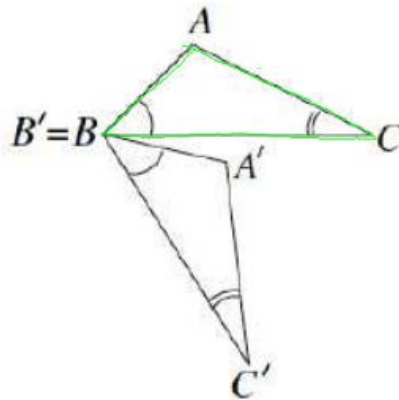
①
reflect
across
BC



②

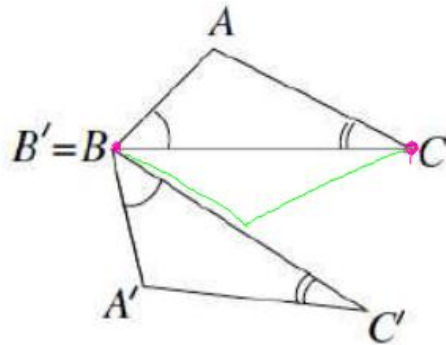
2. In the following picture, triangle ABC can be traced onto a transparency and mapped onto triangle $A'B'C'$. Which basic rigid motion or sequence of, would map one triangle onto the other?

← slide
translate
rotation
turn
reflection
flip



Rotate $\triangle A'B'C'$
around point B
until the triangles
match up

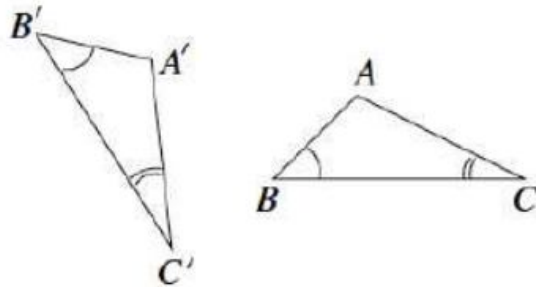
3. In the following picture, triangle ABC can be traced onto a transparency and mapped onto triangle $A'B'C'$. Which basic rigid motion, or sequence of, would map one triangle onto the other?



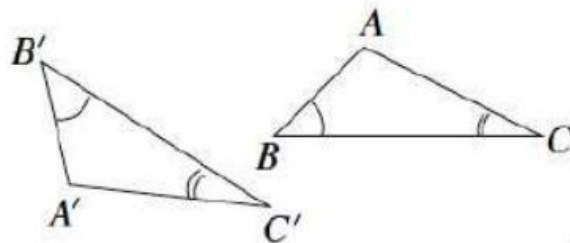
1) Rotate $\triangle A'B'C'$ around point B until C' matches up with C .
 2) Reflect $\triangle A'B'C'$ over line \overline{BC}

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:



Scenario 2:



5. Let two figures ABC and $A'B'C'$ be given so that the length of curved segment AC equals the length of curved segment $A'C'$, $\angle B = \angle B' = 80^\circ$, and $|AB| = |A'B'| = 5$. With clarity and precision, describe a sequence of rigid motions that would map figure ABC onto figure $A'B'C'$.

① Translate figure ABC along vector $\overrightarrow{BB'}$

② Rotate figure ABC around point B until $A = A'$

③ Reflect figure ABC over line $A'B'$

