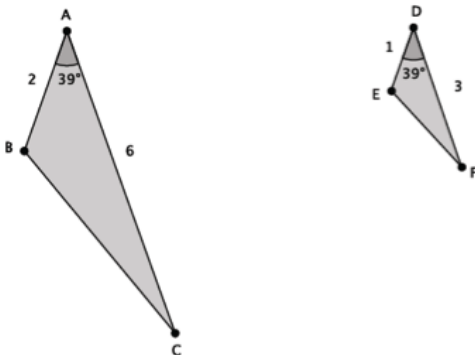


Lesson Summary

Given just one pair of corresponding angles of a triangle as equal, use the side lengths along the given angle to determine if the triangles are in fact similar.

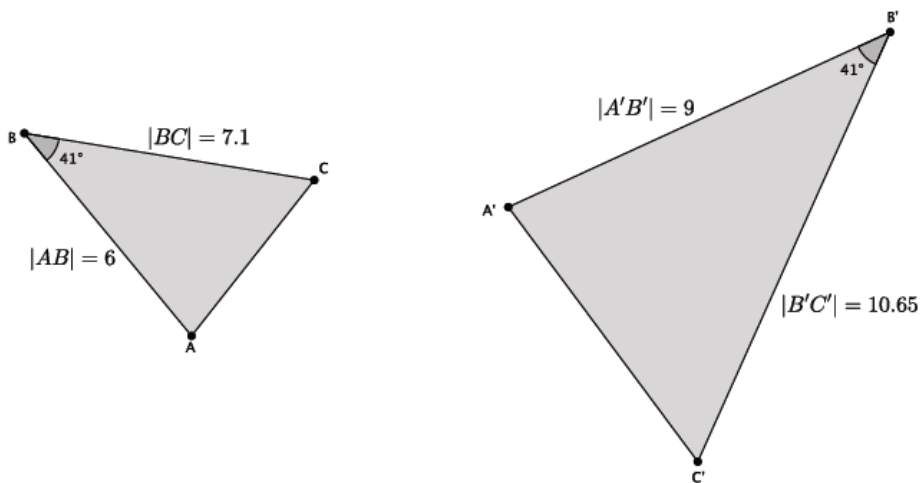


$$|\angle A| = |\angle D| \text{ and } \frac{1}{2} = \frac{3}{6} = r; \text{ therefore, } \triangle ABC \sim \triangle DEF.$$

Given similar triangles, use the fact that ratios of corresponding sides are equal to find any missing measurements.

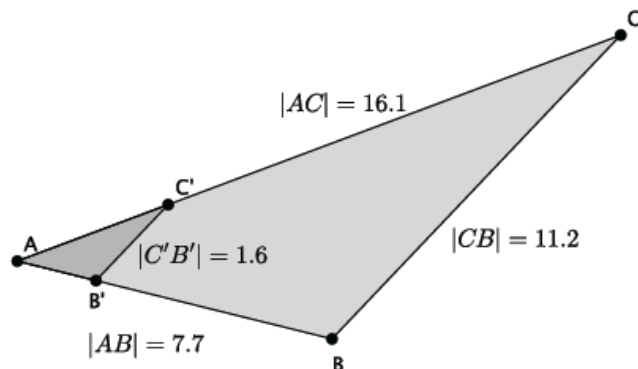
Problem Set

- In the diagram below, you have $\triangle ABC$ and $\triangle A'B'C'$. Use this information to answer parts (a)–(b).

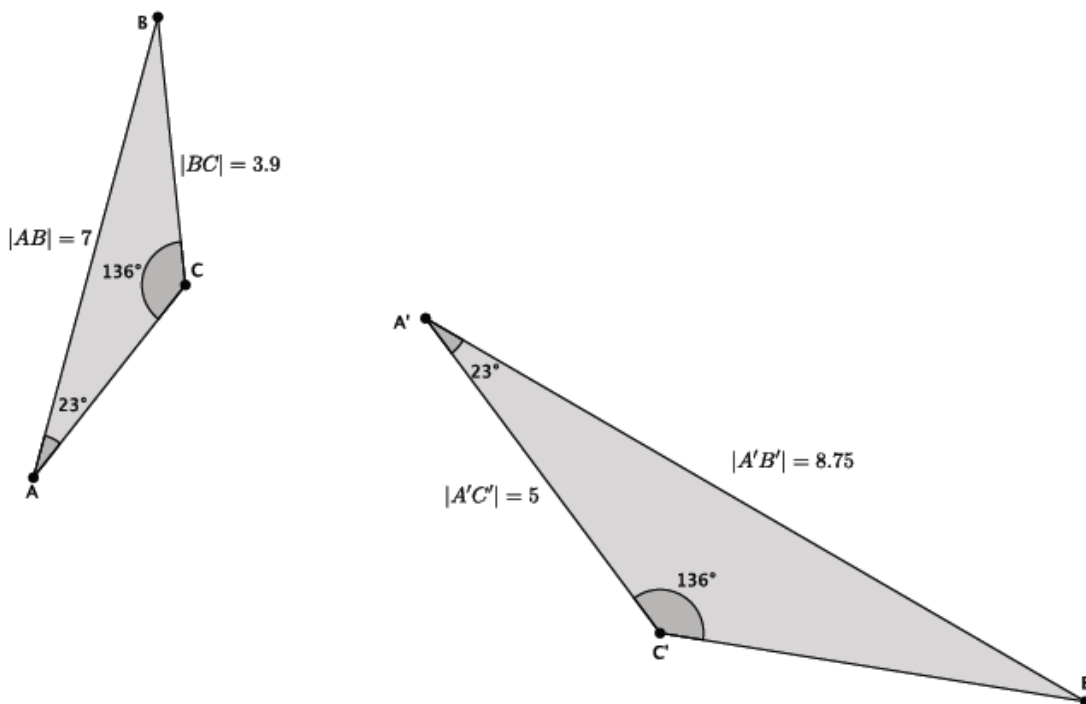


- Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.
- Assume the length of side \overline{AC} is 4.3. What is the length of side $\overline{A'C'}$?

2. In the diagram below, you have $\triangle ABC$ and $\triangle AB'C'$. Use this information to answer parts (a)–(d).

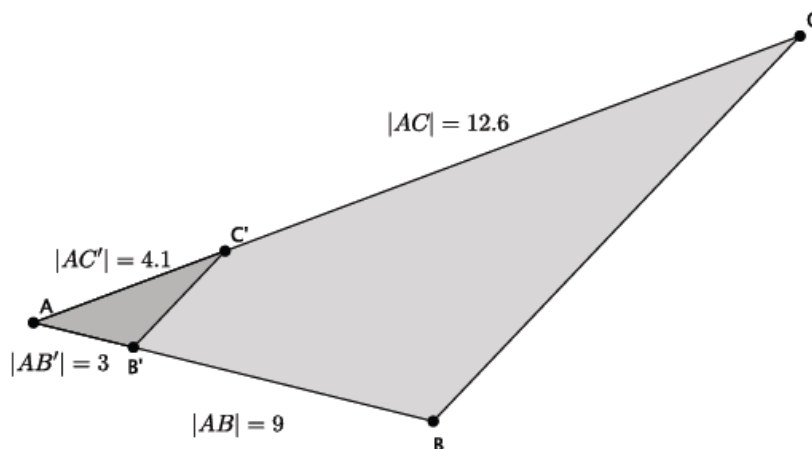


- Based on the information given, is $\triangle ABC \sim \triangle AB'C'$? Explain.
 - Assume the line containing \overline{BC} is parallel to the line containing $\overline{B'C'}$. With this information, can you say that $\triangle ABC \sim \triangle AB'C'$? Explain.
 - Given that $\triangle ABC \sim \triangle AB'C'$, determine the length of side $\overline{AC'}$.
 - Given that $\triangle ABC \sim \triangle AB'C'$, determine the length of side $\overline{AB'}$.
3. In the diagram below, you have $\triangle ABC$ and $\triangle A'B'C'$. Use this information to answer parts (a)–(c).



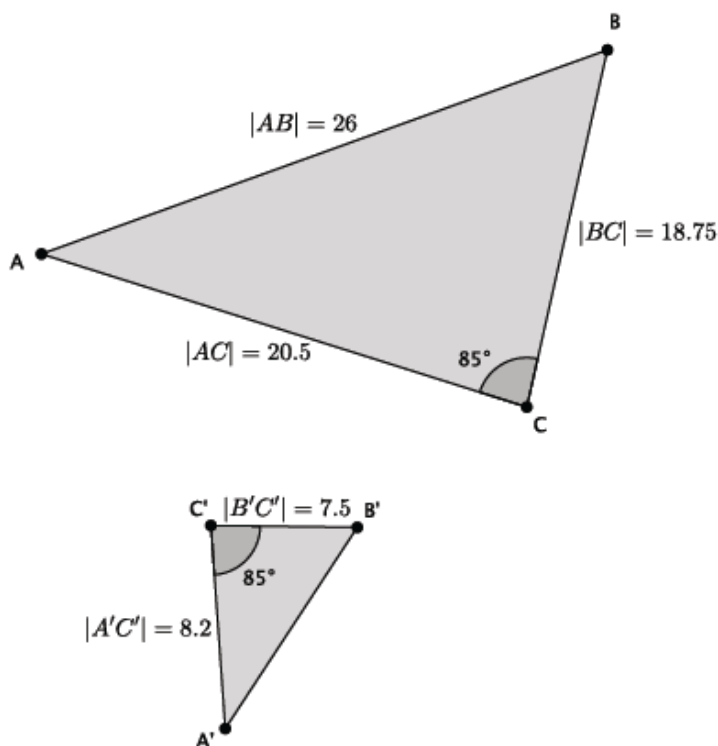
- Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.
- Given that $\triangle ABC \sim \triangle A'B'C'$, determine the length of side $\overline{B'C'}$.
- Given that $\triangle ABC \sim \triangle A'B'C'$, determine the length of side \overline{AC} .

4. In the diagram below, you have $\triangle ABC$ and $\triangle AB'C'$. Use this information to answer the question below.



Based on the information given, is $\triangle ABC \sim \triangle AB'C'$? Explain.

5. In the diagram below, you have $\triangle ABC$ and $\triangle A'B'C'$. Use this information to answer parts (a)–(b).



- Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.
- Given that $\triangle ABC \sim \triangle A'B'C'$, determine the length of side $\overline{A'B'}$.