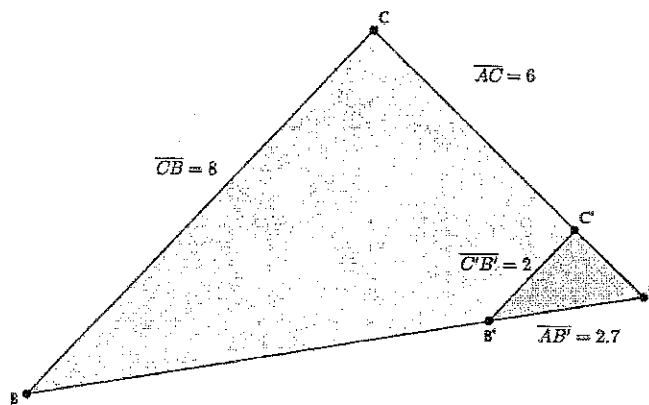


Writing Arguments

Classwork

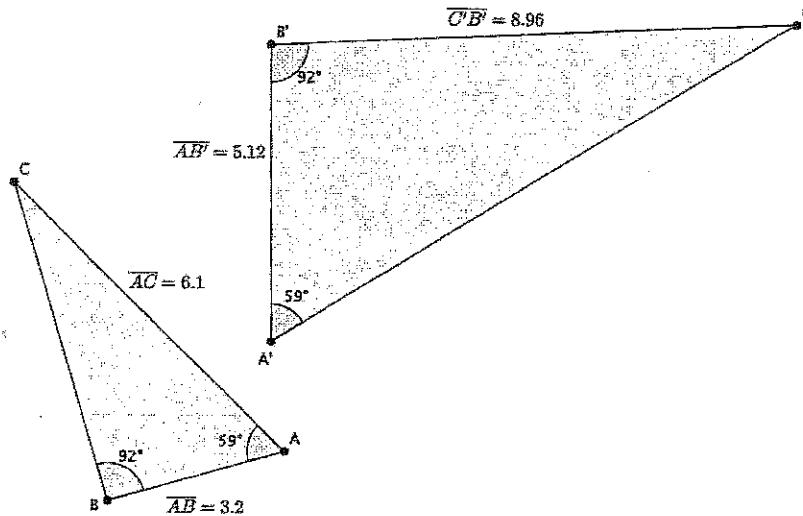
Exercises

1. 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 line BC is parallel to line $B'C'$. 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 AC' .
- Given that $\triangle ABC \sim \triangle AB'C'$, determine the length of AB .

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

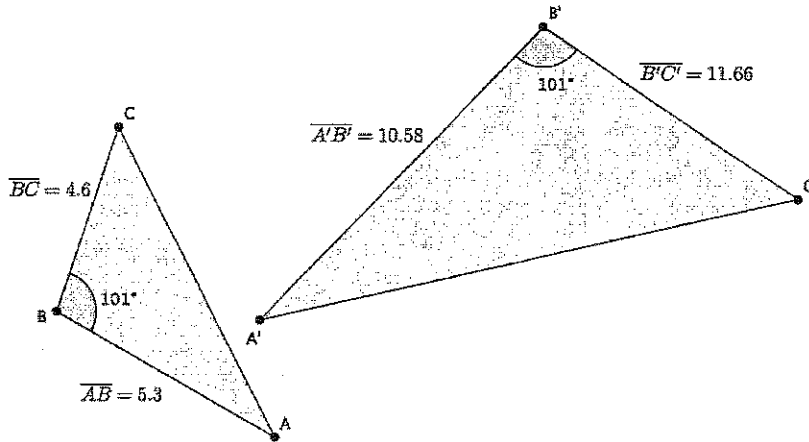


a. Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.

b. Given that $\triangle ABC \sim \triangle A'B'C'$, determine the length of $A'C'$.

c. Given that $\triangle ABC \sim \triangle A'B'C'$, determine the length of BC .

3. In the diagram below you have $\triangle ABC$ and $\triangle A'B'C'$. Use this information to answer the question below.

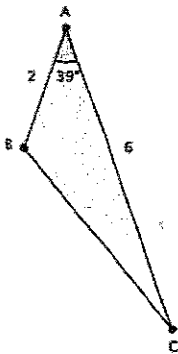


Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.

Writing Arguments

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 triangles are in fact similar.

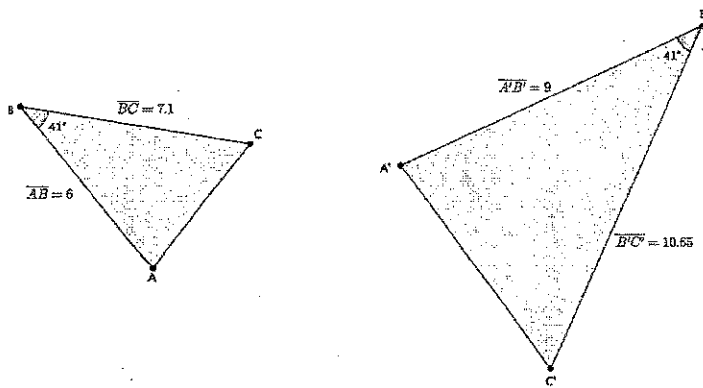


$|\angle A| = |\angle D|$ and $\frac{1}{2} = \frac{3}{6} = r$; therefore,
 $\triangle ABC \sim \triangle DEF$.

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

Problem Set

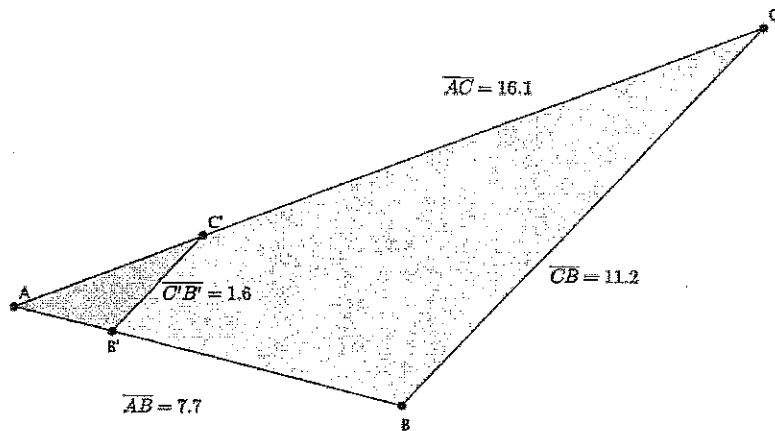
1. In the diagram below, you have $\triangle ABC$ and $\triangle A'B'C'$. Use this information to answer parts (a)–(b):



- a. Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.

- b. Assume the length of AC is 4.3. What is the length of A'C'?

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



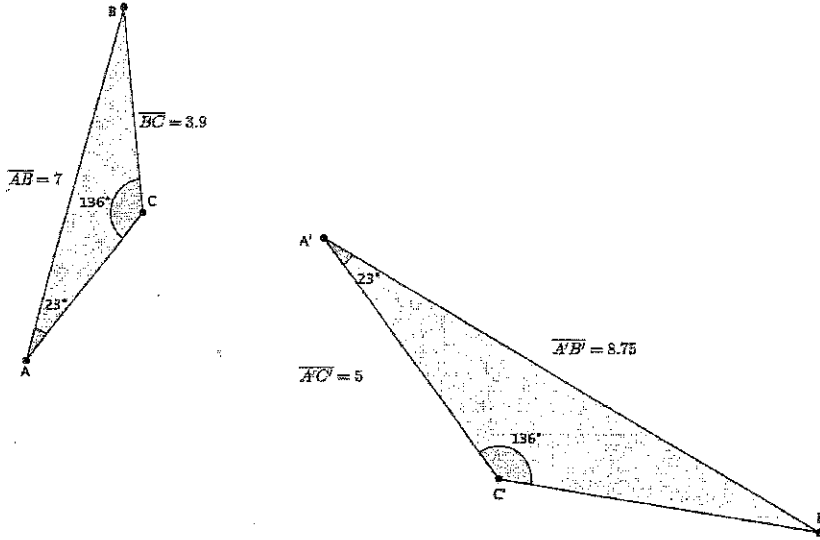
- a. Based on the information given, is $\triangle ABC \sim \triangle AB'C'$? Explain.

- b. Assume line BC is parallel to line $B'C'$. With this information, can you say that $\triangle ABC \sim \triangle AB'C'$? Explain.

- c. Given that $\triangle ABC \sim \triangle AB'C'$, determine the length of AC' .

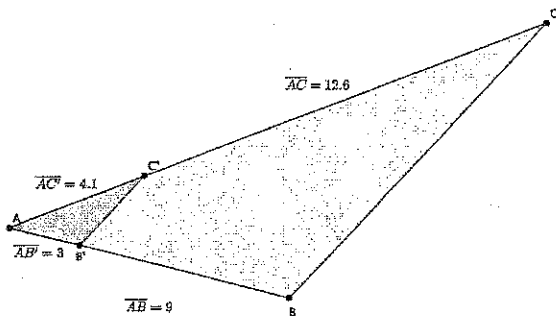
- d. Given that $\triangle ABC \sim \triangle AB'C'$, determine the length of AB' .

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



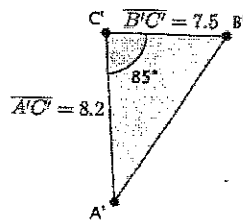
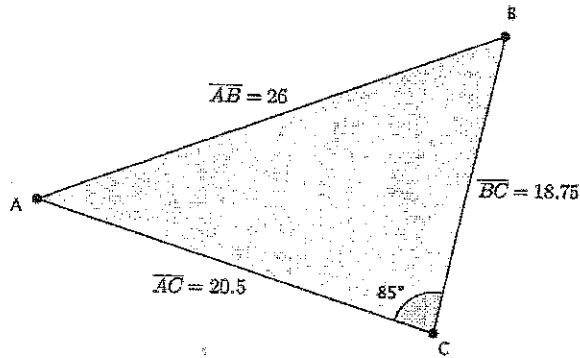
- Based on the information given, is $\triangle ABC \sim \triangle A'B'C'$? Explain.
- Given that $\triangle ABC \sim \triangle A'B'C'$, determine the length of $B'C'$.
- Given that $\triangle ABC \sim \triangle A'B'C'$, determine the length of AC .

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).



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