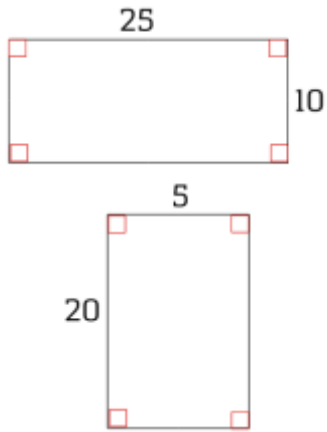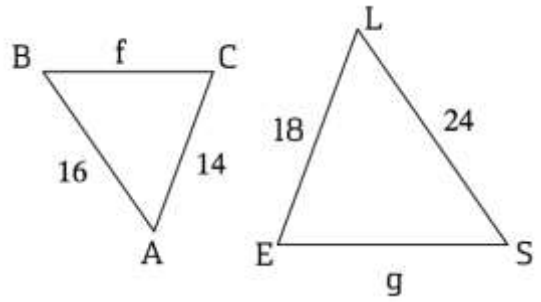1.   Are the figures below similar? Explain why or why not and give numerical justification.
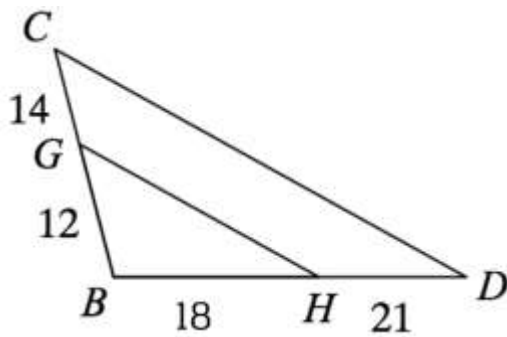
2. Given $\triangle ABC \sim \triangle SLE$. Find the values of f and g.
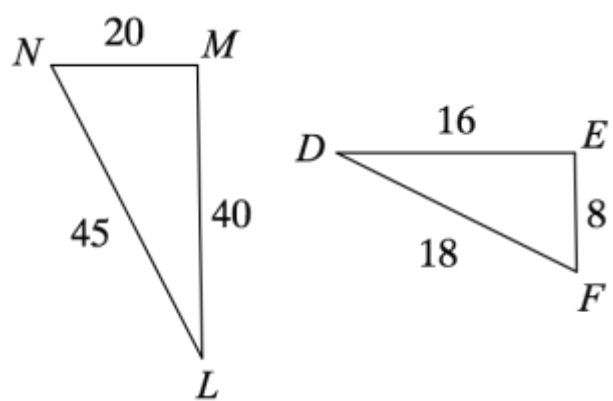

SRT-A3

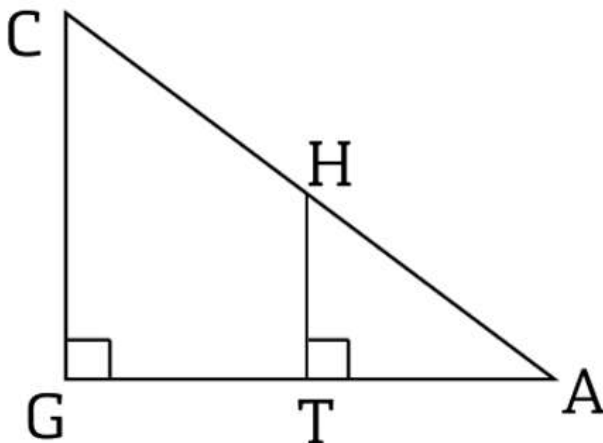In each pair below, justify why the triangles are similar. Then, complete the similarity statement.

3.

4.

$\triangle BCD \sim \triangle$ _ _ _

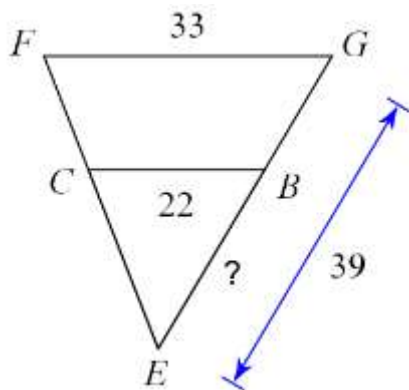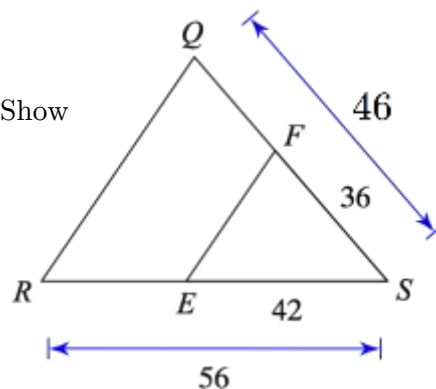$\triangle LMN \sim \triangle$ _ _ _

5.

$\triangle HAT \sim \triangle$ _ _ _

SRT-B4a

6. In the figure below, $\overline{FG} \parallel \overline{CB}$. Find the length of the indicated side.
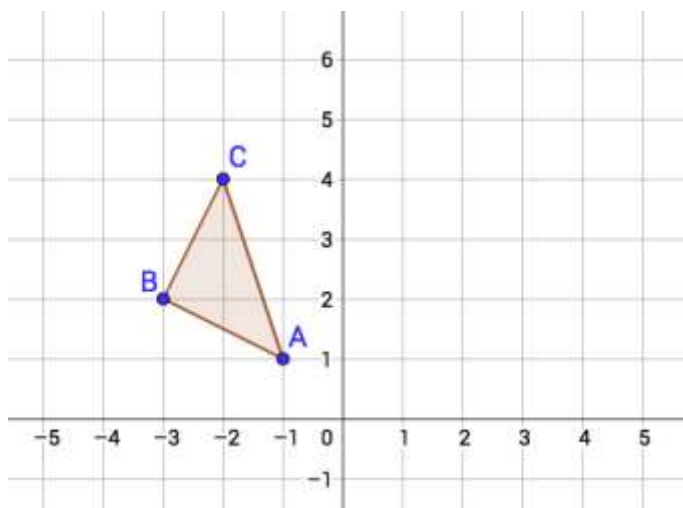

7. Refer to the figure at right. Is $\overline{FE} \parallel \overline{QR}$? Show the calculations that justify your answer.
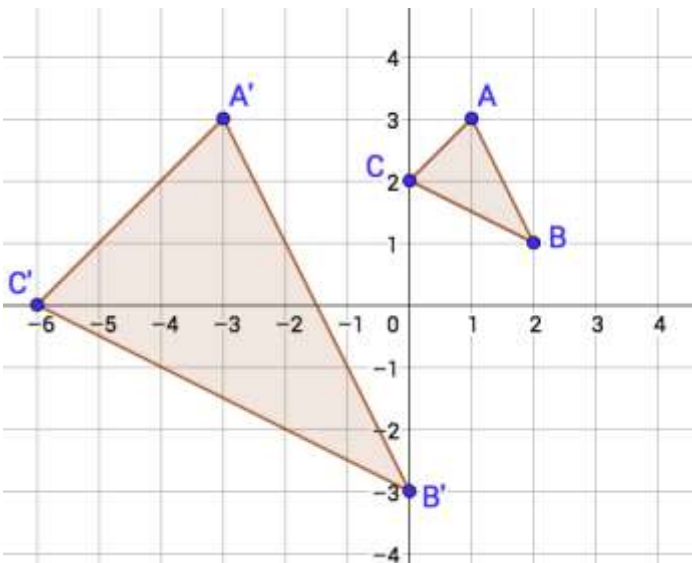

SRT-A1a

8. Suppose $\triangle ABC$ is first translated by $(x, y) \to (x + 2, y - 1)$ and is then dilated about the origin with a scale factor of 2 to create $\triangle A'B'C'$. Draw and label $\triangle A'B'C'$.

9. $\triangle ABC$ in the figure has an area of 2.5 units. What is the area of $\triangle A'B'C'$ after it has been translated and dilated as described in #8?

SRT-A1b

9. Determine both the center of dilation and the scale factor in the dilation below.

Center:
Scale factor:

10. Suppose $\triangle DEF$ (not shown) is dilated about a point lying outside the figure to create $\triangle D'E'F'$. Rate each as True/False.

[   ] $\triangle DEF \cong \triangle D'E'F'$

[   ] $\overline{DD'} \parallel \overline{EE'}$

[   ] $\overline{DE} \parallel \overline{D'E'}$