

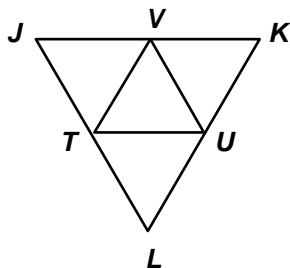
NAME: _____

1. Draw a right triangle and its midsegments. Compare the four triangles created by the midsegments with the original triangle. Make a conjecture about your observations.

2. Write a paragraph proof showing that the midsegments of an equilateral triangle form an equilateral triangle.

Given: Equilateral $\triangle JKL$ with midpoints T , U , and V

Prove: $\triangle TUV$ is equilateral



[1] Each is a right triangle that is similar to the original triangle; the scale factor is $\frac{1}{2}$.

Equilateral $\triangle JKL$ has midpoints T , U , and V . Since $JK = KL = JL$, $\frac{1}{2}JK = \frac{1}{2}KL = \frac{1}{2}JL$ by the Mult.

[2] Prop of =. By the Triangle Midsegment Theorem, $TU = UV = TV$. Thus, $\triangle TUV$ is equilateral.
