Illustrative Mathematics

8.G Similar Triangles II

Task

Triangles *ABC* and *PQR* below share two pairs of congruent angles as marked:



a. Explain, using dilations, translations, reflections, and/or rotations, why $\triangle PQR$ is similar to $\triangle ABC$.

b. Are angles *C* and *R* congruent?

c. Can you show the similarity in part **a** *without* using a reflection? What about *without* using a dilation? Explain.

d. Suppose *DEF* and *KLM* are two triangles with $m(\angle D) = m(\angle K)$ and $m(\angle E) = m(\angle L)$. Are triangles *DEF* and *KLM* similar?



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