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1 Mathematics

## 8.G Similar Triangles II

## Task

Triangles $A B C$ and $P Q R$ below share two pairs of congruent angles as marked:

a. Explain, using dilations, translations, reflections, and/or rotations, why $\triangle P Q R$ is similar to $\triangle A B C$.
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 $D E F$ and $K L M$ are two triangles with $m(\angle D)=m(\angle K)$ and $m(\angle E)=m(\angle L)$. Are triangles $D E F$ and $K L M$ similar?

