

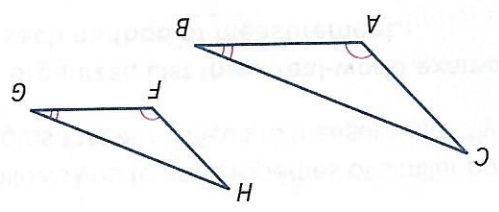
Angle-Angle (AA) Similarity

Key Concept

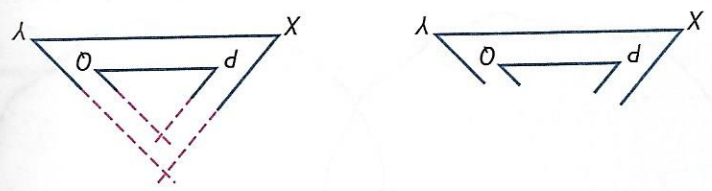
Words If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.

Symbols If $\angle A \cong \angle F$ and $\angle B \cong \angle G$, then $\triangle ABC \sim \triangle FGH$.

Model



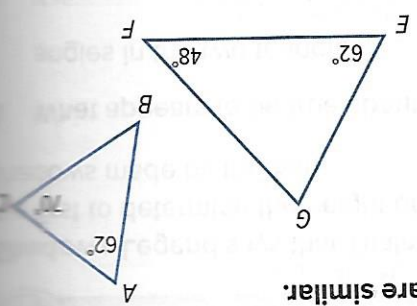
In the figure below, $\angle X \cong \angle P$ and $\angle Y \cong \angle Q$. If you extend the sides of each figure to form a triangle, you can see the two triangles are similar. So, triangle similarity can be proven by showing two pairs of corresponding angles are congruent.



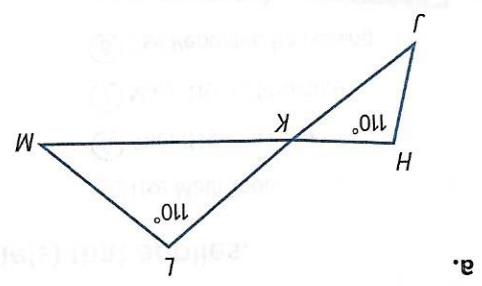
Example

1. Determine whether the triangles are similar. If so, write a similarity statement.

Angle A and $\angle E$ have the same measure, so they are congruent. Since $180 - 62 - 48 = 70$, $\angle G$ measures 70° . Two angles of $\triangle EFG$ are congruent to two angles of $\triangle ABC$, so $\triangle ABC \sim \triangle EFG$.



Got it? Do this problem to find out.



a.

STOP and Reflect
What do you know about the third pair of angles in the triangle?

Work Zone