

SIMILARITY AND TRIANGLES

* How is similarity different than congruence?

Similarity Shortcuts

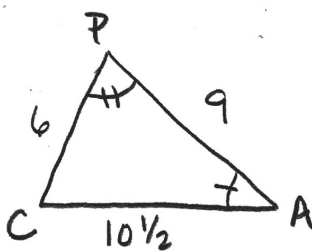
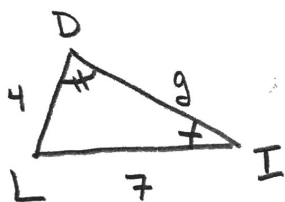
AA Similarity Conjecture:

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

SSS Similarity Conjecture:

If 3 sides of one triangle are proportional to 3 sides of another, then the triangles are similar.

Ex.



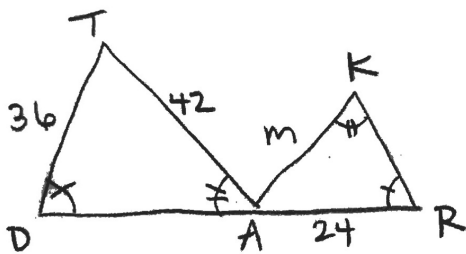
Find g .

$\triangle DLI \sim \triangle PAC$
by AA Similarity

~~$\frac{4}{6} = \frac{g}{9}$~~ because sides are proportional

$$\frac{6g}{6} = \frac{36}{4} \quad \boxed{g=6}$$

Ex.



Find m .

$\triangle DTA \sim \triangle KRA$ by AA Similarity

~~$\frac{24}{36} = \frac{m}{42}$~~

$$\frac{36m}{36} = \frac{1008}{36}$$

$$\boxed{m=28}$$