

Unit 7 Notes5: Proofs with Similarity

I can prove that two triangles are similar.

Remember: The three shortcuts for proving two triangles are similar are...

1. _____

2. _____

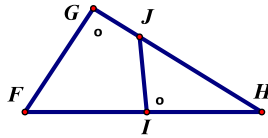
3. _____

1) **GIVEN:**

$$\angle G \cong \angle HIJ$$

PROVE:

$$\triangle FGH \sim \triangle JIH$$

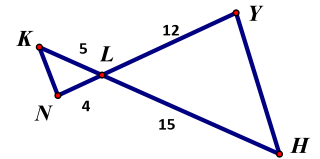


2) **GIVEN:**

$$LN = 4 \text{ cm}, KL = 5 \text{ cm}$$

$$LY = 12 \text{ cm}, LH = 15 \text{ cm}$$

PROVE: $\triangle KLN \sim \triangle HLY$



STATEMENT	REASON

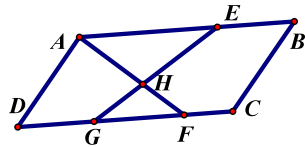
STATEMENT	REASON

3) **GIVEN:**

ABCD is a parallelogram

PROVE:

$$\triangle AHE \sim \triangle FHG$$

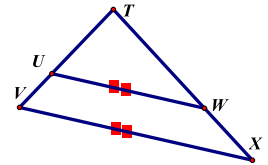


4) **GIVEN:**

$$\overline{UW} \parallel \overline{VX}$$

PROVE:

$$\triangle TUW \sim \triangle TVX$$



STATEMENT	REASON

STATEMENT	REASON

Remember: By definition, once we know two polygons are similar we also know...

1. _____

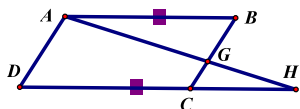
2. _____

5) **GIVEN:**

$$\overline{AB} \parallel \overline{DC}$$

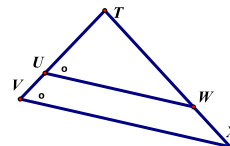
PROVE:

$$GA \cdot GC = GB \cdot GH$$



6) **GIVEN:** $\angle TUV \cong \angle TVX$

PROVE: $\frac{TU}{TV} = \frac{TW}{TX}$



STATEMENT	REASON

STATEMENT	REASON