

PAP Geometry
6.2 – In class Practice

Name _____

Which of the following pairs of triangles must be similar? (Yes or No) Show your work, justify your answer with a theorem (AA~, SAS~, SSS~) and write a similarity statement. Figures are not drawn to scale.

1.

similar? yes or no
 thm? _____
 $\triangle ABC \sim \triangle$ _____

2.

similar? yes or no
 thm? _____
 $\triangle HIJ \sim \triangle$ _____

3.

similar? yes or no
 thm? _____
 $\triangle ATV \sim \triangle$ _____

4.

similar? yes or no
 thm? _____
 $\triangle ABC \sim \triangle$ _____

5.

similar? yes or no
 thm? _____
 $\triangle WUV \sim \triangle$ _____

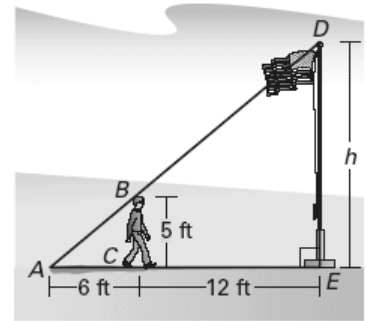
6.

similar? yes or no
 thm? _____
 $\triangle MQN \sim \triangle$ _____

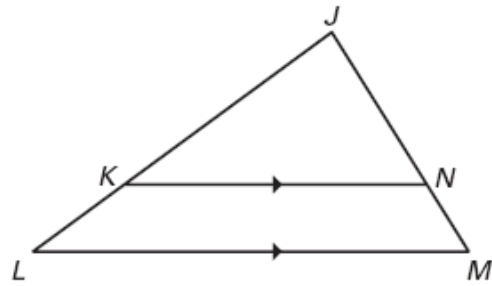
In order to estimate the height h of a flag pole, a 5 foot tall male student stands so that the tip of his shadow coincides with the tip of the flag pole's shadow. This scenario results in two similar triangles as shown in the diagram.

7. Why are the two overlapping triangles similar?

8. What is the height h (in feet) of the flag pole?



9. Given: $\overline{KN} \parallel \overline{LM}$
 Prove: $\triangle JKN \sim \triangle JLM$



10. Given: $\overline{AC} \perp \overline{BD}$ and $\overline{DE} \perp \overline{AB}$
 Prove: $\frac{AF}{DF} = \frac{AE}{DC}$

