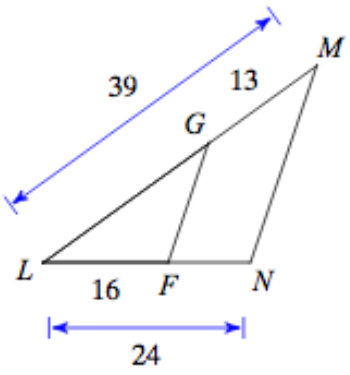
Geometry Honors
Unit 7 Relationships with Triangles
Unit 7.2 Review

Mathematician: _____
Period:_____

Target 2: Prove and apply properties of similar triangles (AA~, SSS~, SAS~)

Directions: Based on the given diagram, determine if the triangles are similar. If yes, identify the theorem that can be used to prove they are similar and write the similarity statement. Select all that apply.

1)

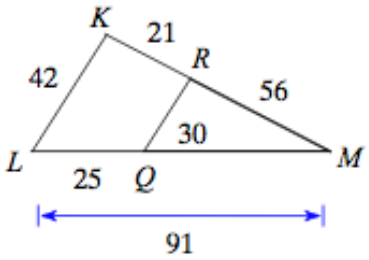


(a) Yes (b) No (c) AA~

(d) SSS~ (e) SAS~

$\Delta LMN \sim$_____

2)

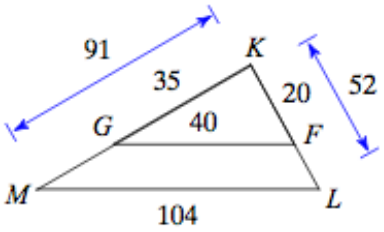


(a) Yes (b) No (c) AA~

(d) SSS~ (e) SAS~

$\Delta MLK \sim$_____

3)

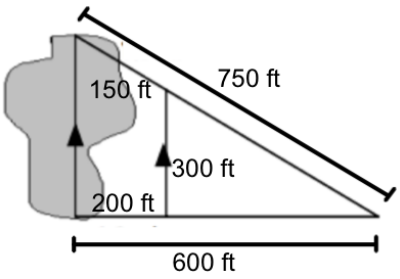


(a) Yes (b) No (c) AA~

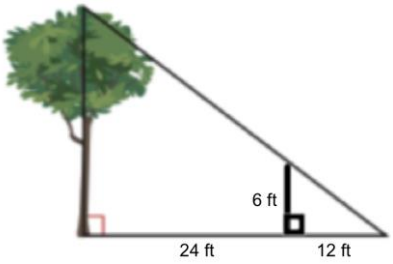
(d) SSS~ (e) SAS~

$\Delta KLM \sim$_____

4) Find the distance across the lake.



5) A 6 ft person casts a shadow that's 12 ft long. A nearby tree casts a shadow. John says the height of the tree is 12 ft. Is he correct?



6) In ΔKLM and ΔKEF, $\angle L \cong \angle E$ and $\angle M \cong \angle F$. The length of side $LK = 96$ and side $EK = 6x$. If the length of side $MK = 88$ and $FK = 33$, what is the measure of side EK?

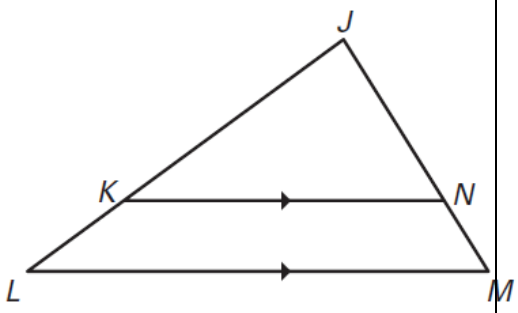
7) In ΔCDE and ΔUVW, $\angle C \cong \angle U$ and $\angle D \cong \angle V$. The lengths of the sides are $DE = 84$, $VW = 4x - 10$, $DC = 112$, and $UV = 40$. What is the length of side WV?

8) In ΔDEF and ΔDST, $\angle E \cong \angle S$ and $\angle F \cong \angle T$. The lengths of the sides are $DT = 8x + 2$, $SD = 12x - 12$, $FD = 15x + 1$, and $ED = 20x - 6$. What is the measure of side SD?

9. Complete the similarity proof.
Given: $\overline{KN} \parallel \overline{LM}$

Prove: $\Delta JKN \sim \Delta JLM$

Statement	Reason



10. Complete the similarity proof.
Given: Diagram

Prove: $\Delta RST \sim \Delta ABC$

Statement	Reason