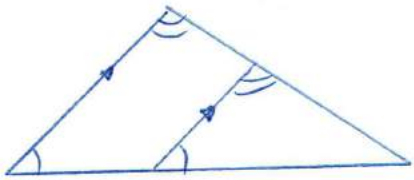
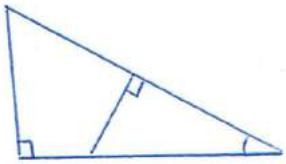
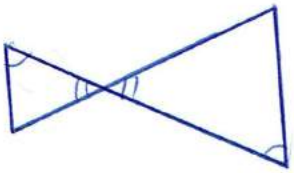
Notes: Determining if Triangles are Similar Date: _____

There are 3 shortcuts that allow us to determine if triangles are similar. Triangles are similar if they meet any of the 3 following conditions:

AA ~

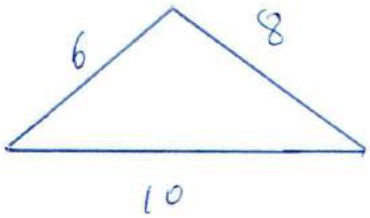
- If 2 pairs of corresponding ∠s are ≅, then the triangles are similar.

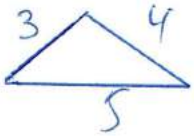




SSS~

- If 3 pairs of corresponding sides are proportional, then triangles are similar.

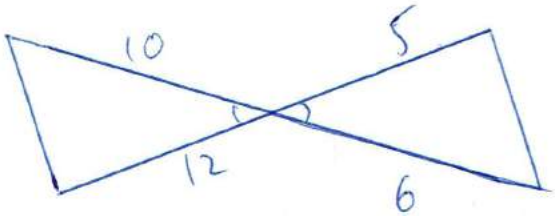
short w/short
long w/long
med w/med





SAS~

- If 2 pairs of corresponding sides are proportional and the pr of included ∠s are ≅, then the triangles are similar.



$\frac{10}{5} = 2$

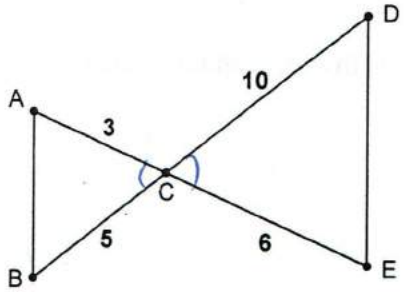
$\frac{12}{6} = 2$

Determining Similarity of Triangles

Date _____

Examples: Are triangles similar? If so, write the similarity statement and justify.

1.

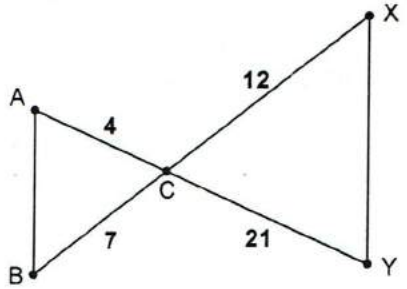


$\frac{3}{6} = \frac{1}{2}$

$\frac{5}{10} = \frac{1}{2}$

$\triangle ABC \sim \triangle EDC$ by SAS~

2.

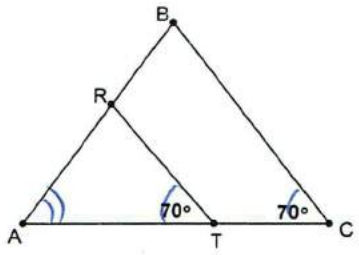


$\frac{4}{12} = \frac{1}{3}$

$\frac{7}{21} = \frac{1}{3}$

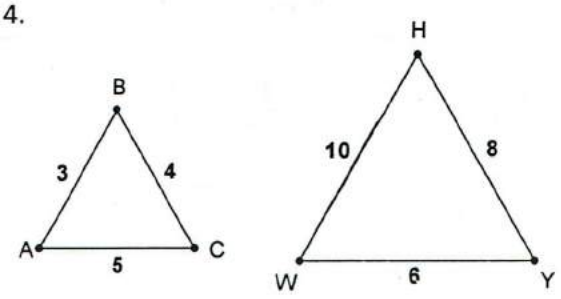
$\triangle ABC \sim \triangle XYC$ by SAS~

3.



$\triangle ABC \sim \triangle ART$ by AA~

4.



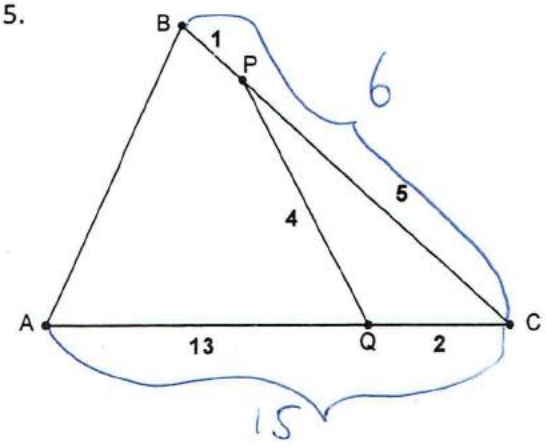
$\frac{3}{6} = \frac{1}{2}$

$\frac{4}{8} = \frac{1}{2}$

$\frac{5}{10} = \frac{1}{2}$

$\triangle ABC \sim \triangle WYH$ by SAS~

5.



$\frac{6}{2} = 3$

$\frac{15}{5} = 3$

$\triangle PQC \sim \triangle ABC$ by SAS~

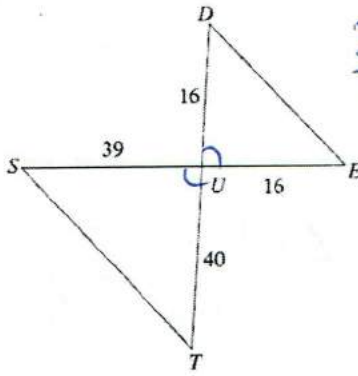
Kuta Software - Infinite Geometry Name_____

Similar Triangles

Date_____ Period____

State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement. Show work for checking proportional sides!

1)

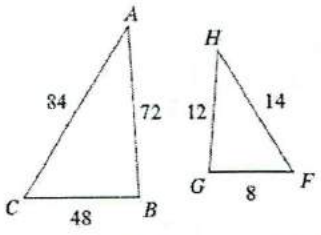


$\frac{39}{16}$

$\frac{40}{16} = \frac{5}{2}$

$\Delta UTS \sim$ none by none

2)



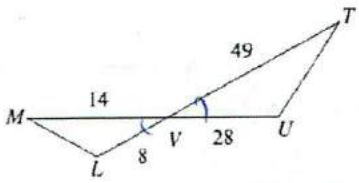
$\frac{48}{8} = 6$

$\frac{84}{14} = 6$

$\frac{72}{12} = 6$

$\Delta CBA \sim \Delta FGH$ by SSS~

3)

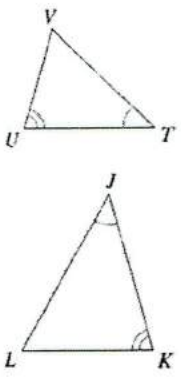


$\frac{8}{28} = \frac{2}{7}$

$\frac{14}{49} = \frac{2}{7}$

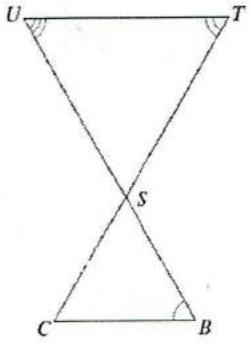
$\Delta VUT \sim \Delta VLM$ by SAS~

4)



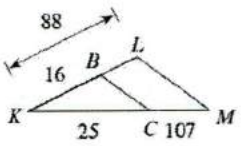
$\Delta JKL \sim \Delta TUV$ by AA~

5)



$\Delta STU \sim$ none by none

6)



$\frac{16}{88} = \frac{2}{11}$

$\frac{25}{132}$

$\Delta KLM \sim$ none by none