Geometry

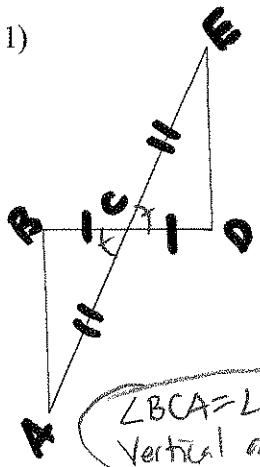
Name KEY

Flowcharts!

Date

Determine if the two triangles are congruent. Use the given information and add information you know to be true to create a flowchart to organize your information and conclusion.

1)

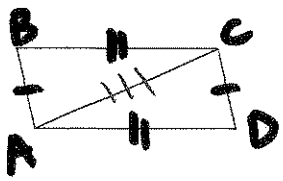


∠BCA=∠DCE (Vertical angles) — BC=DC — AC=EC

→ △BCA≅△DCE

SAS≅

2)

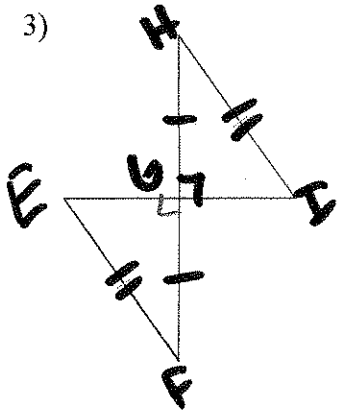


AC=CA (Shared side) — AB=CD — BC=DA

→ △ABC≅△CDA

SSS≅

3)

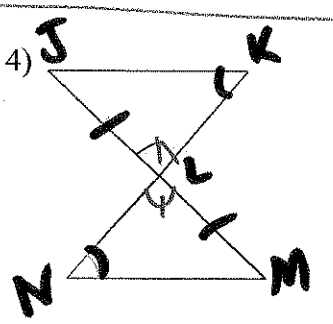


∠HGE=∠FGE (Right angles) — FG=HG — FH=HI

→ △HGI≅△FGE

HL≅

4)

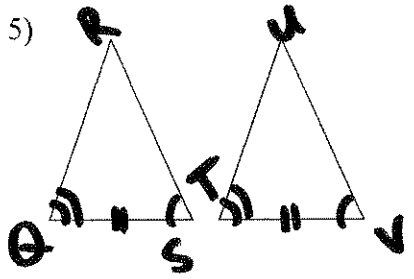


∠JLK=∠MLN — ∠K=∠N — JL=ML

→ △JLK≅△MLN

AAS≅

5)

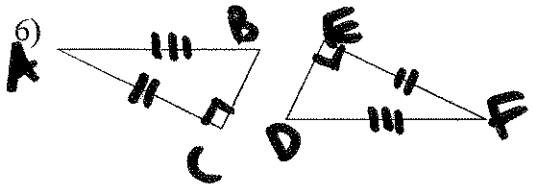


$\angle Q = \angle T$ $\angle S = \angle V$ $QS = TV$

$\triangle QRS \cong \triangle TUV$

ASA$\cong$

6)

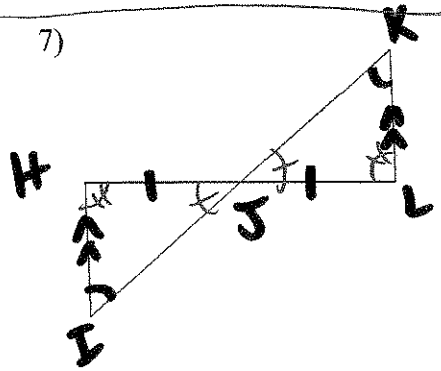


$\angle C = \angle E$ Right angles $AB = FD$ $BC = DE$

$\triangle ABC \cong \triangle FDE$

HL$\cong$

7)

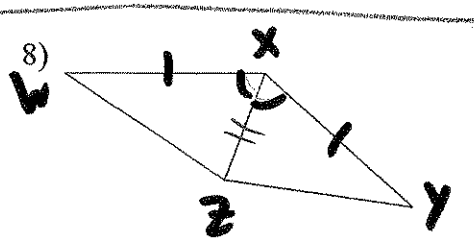


$\angle I = \angle K$ $\angle HJI = \angle LJK$ vertical angles $HJ = LJ$

$\triangle HJI \cong \triangle LJK$

AAS$\cong$ or ASA$\cong$

8)



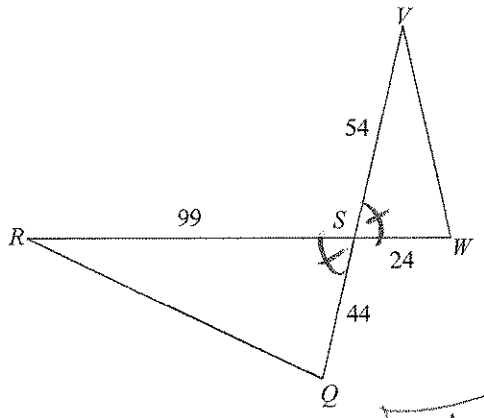
$XZ = XZ$ Shared side $WX = YX$ $\angle WXZ = \angle YXZ$

$\triangle WXZ \cong \triangle YXZ$

SAS$\cong$

State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

9)

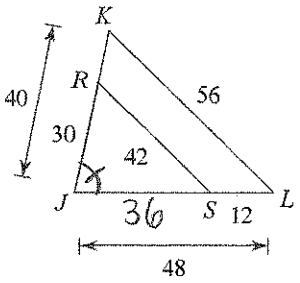


$\triangle SRQ \sim$ ΔSVW by SAS~

$\frac{99}{54} = 1.8\overline{3}$

$\frac{44}{24} = 1.8\overline{3}$

10)

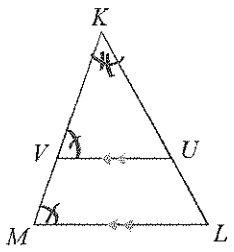


$\triangle JKL \sim$ ΔJRS SAS~

$\frac{48}{36} = 1.\overline{33}$

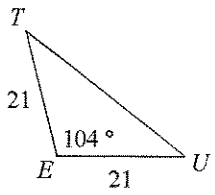
$\frac{40}{30} = 1.\overline{33}$

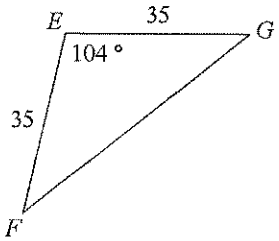
11)



$\triangle KLM \sim$ ΔKUV AA~

12)



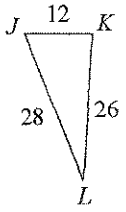


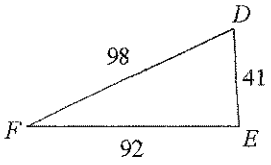
$\triangle EFG \sim$ ΔEUT SAS~

$\frac{35}{21} = \frac{35}{21}$

State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

9)

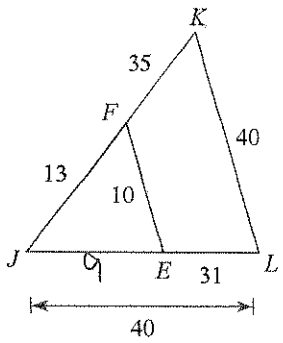




$\triangle DEF \sim$ Not similar

$\frac{98}{28} = 3.5$ $\frac{92}{26} = 3.538$

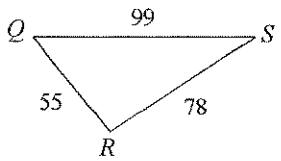
10)

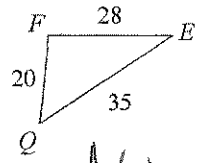


$\triangle JKL \sim$ Not similar

$\frac{40}{9} = 4.\overline{4}$ $\frac{48}{13} = 3.69$

11)

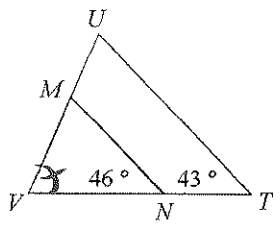




$\triangle QRS \sim$ Not similar

$\frac{99}{35} = 2.83$ $\frac{78}{28} = 2.79$

12)



$\triangle VUT \sim$ Not similar

Only one pair of $\cong$ angles. Need at least two.