

G3: Similar Triangles

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

1)

$\frac{129}{40} = 3.225$
 $\frac{105}{32} = 3.28125$
 $\frac{78}{24} = 3.25$

~~AAA~~
not similar

2)

$\frac{99}{11} = 9$
 $\frac{126}{14} = 9$

$\angle E \cong \angle P$
Similar by SAS~

$\triangle PQR \sim \triangle EFG$

3)

$\frac{21}{7} = 3$
 $\frac{33}{11} = 3$
 $\frac{39}{13} = 3$

Similar by SSS~

$\triangle STU \sim \triangle NML$

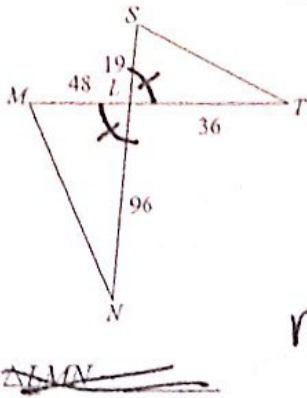
4)

$\angle K \cong \angle Q$
 $\angle J \cong \angle R$

Similar by AA~

$\triangle PQR \sim \triangle LKJ$

5) $\angle SLT \cong \angle MLN$

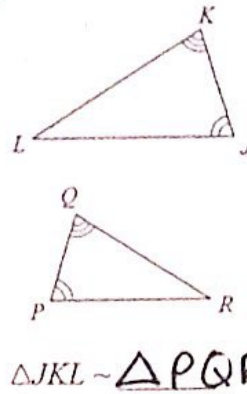


$$\frac{96}{36} = 2.\bar{6}$$

$$\frac{48}{19} = 2.53$$

not similar

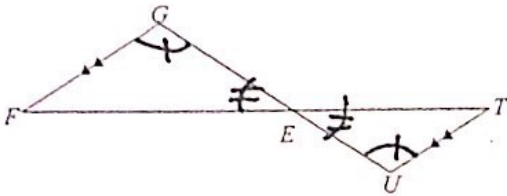
6)



$\angle P \cong \angle J$
 $\angle K \cong \angle Q$
 Similar by AA

$\triangle JKL \sim \triangle PQR$

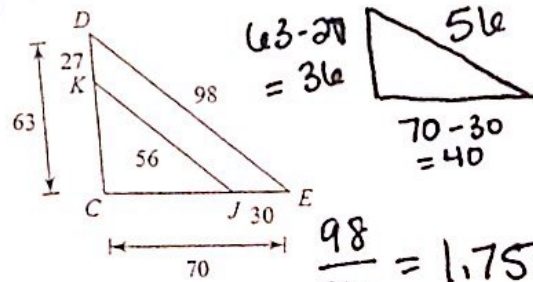
7)



$\triangle EFG \sim \triangle ETU$

$\angle G \cong \angle U$ (alt. interior angles)
 $\angle GEF \cong \angle UET$ (vertical angles)
 Similar by AA

8)



$$63 - 27 = 36$$

$$70 - 30 = 40$$

$\triangle CDE \sim \triangle CKJ$

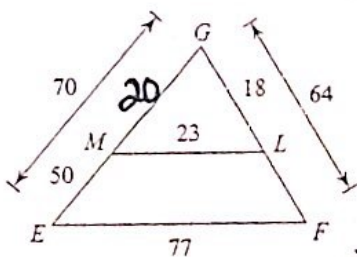
Similar by SSS

$$\frac{98}{56} = 1.75$$

$$\frac{70}{40} = 1.75$$

$$\frac{63}{36} = 1.75$$

9)



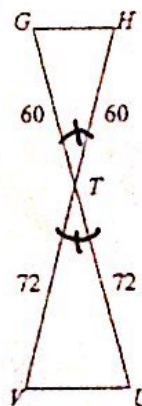
~~$\triangle GFE \sim \triangle MLE$~~

$$\frac{77}{23} = 3.35$$

$$\frac{70}{20} = 3.5 \quad \frac{64}{18} = 3.\bar{5}$$

not similar

10)



$\angle GTH \cong \angle UTV$ (vertical angles)

$$\frac{60}{72} = 0.\bar{83}$$

$$\frac{60}{72} = 0.\bar{83}$$

$\triangle TUV \sim \triangle THG$

$\alpha \sim \triangle TGH$

Similar by SAS