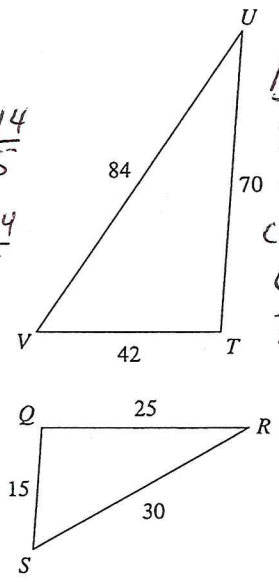
7)



$\frac{84}{30} = \frac{14}{5}$

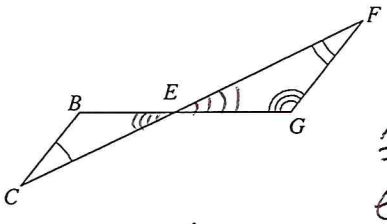
$\frac{70}{25} = \frac{14}{5}$

$\frac{42}{15} = \frac{14}{5}$

Because $\frac{TU}{QR} = \frac{UV}{RS} = \frac{TV}{QS} = \frac{14}{5}$, corresponding sides are proportional. Therefore, $\triangle TUV \sim \triangle QRS$ by SSS~

$\triangle TUV \sim$ $\triangle QRS$

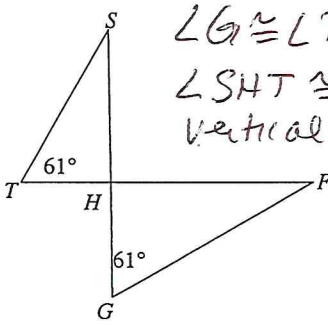
8)



Although vertical $\angle$'s are $\cong$, one $\cong$ pair is not enough to prove ~.

$\triangle EFG \sim$ NIA

9)



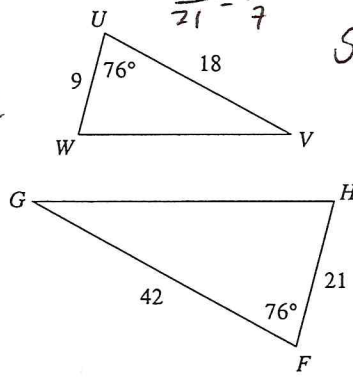
$\angle G \cong \angle T$ by given and $\angle SHT \cong \angle FHG$ because vertical $\angle$'s are $\cong$. Therefore $\triangle SHT \sim \triangle FHG$ by AA~

$\triangle HGF \sim$ $\triangle HST$

10)

$\frac{18}{42} = \frac{3}{7}$

$\frac{9}{21} = \frac{3}{7}$



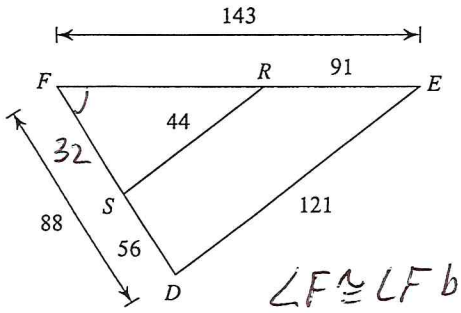
Since $\frac{UW}{FH} = \frac{UV}{FG} = \frac{3}{7}$, surrounding sides are proportional. The included $\angle$'s are $\cong$, $\angle U \cong \angle V$ because they both have measure 76°. The $\triangle$'s are ~ by SAS~.

$\triangle FGH \sim \triangle UVW$

$\triangle FGH \sim$ $\triangle UVW$

11)

143 − 91 = 52



88 − 56 = 32

$\div 8$

$\frac{32}{88} = \frac{4}{11}$

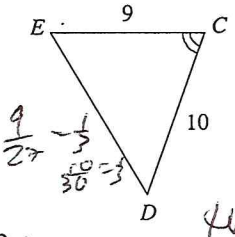
$\frac{52}{143} = \frac{4}{11}$

$(\div 13)$

$\angle F \cong \angle F$ by reflexive PC and the sides surrounding it have the same ratio, $\frac{FS}{FD} = \frac{FR}{FE} = \frac{4}{11}$. Therefore, $\triangle FED \sim \triangle FRS$ by SAS~

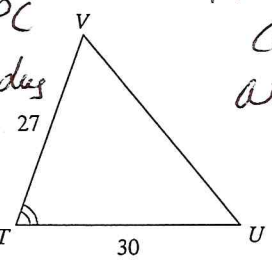
$\triangle FED \sim$ $\triangle FRS$

12)



$\frac{9}{27} = \frac{1}{3}$

$\frac{10}{30} = \frac{1}{3}$



$\angle C \cong \angle T$ by given, and the surrounding corresponding sides are in proportion $\frac{CE}{TV} = \frac{CD}{TU} = \frac{1}{3}$. Therefore, $\triangle TUV \sim \triangle CDE$ by SAS~

$\triangle TUV \sim$ $\triangle CDE$