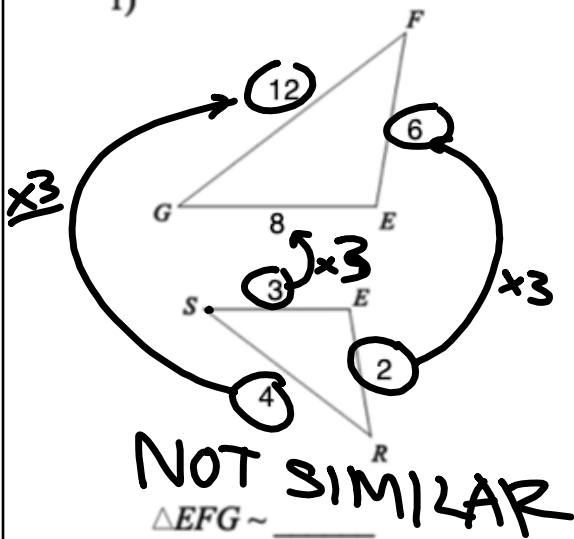


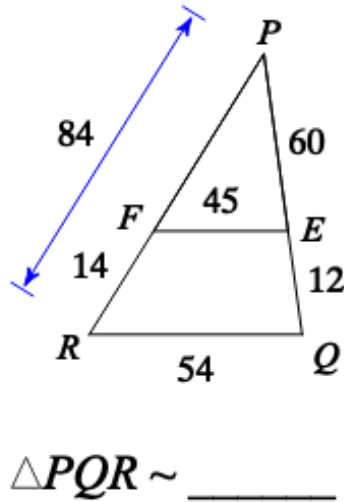
4&7Oct Bellwork

Determine if the triangles in each pair are similar. If so, write the similarity statement and the relating ratio.

1)

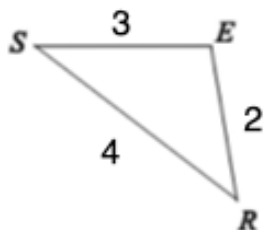
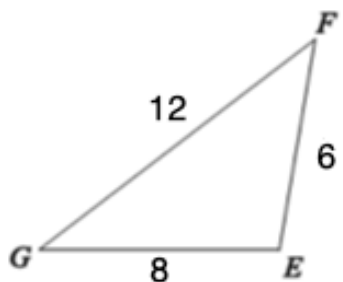


2)



Determine if the triangles in each pair are similar. If so, write the similarity statement and the relating ratio.

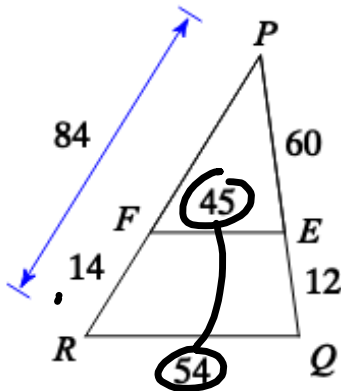
1)



$\triangle EFG \sim$ _____

Determine if the triangles in each pair are similar. If so, write the similarity statement and the relating ratio.

2)



$\triangle PQR \sim \triangle PEF$

$$\frac{54}{45} = \frac{60+12}{60} = \frac{72}{60} = \frac{84}{70}$$

$$\frac{6}{5} = \frac{6}{5} = \frac{6}{5}$$

84-14

$60x = 72$

Ratio: $\frac{6}{5}$

Homework questions & hand in
(Test corrections from those who got tests
back last time)

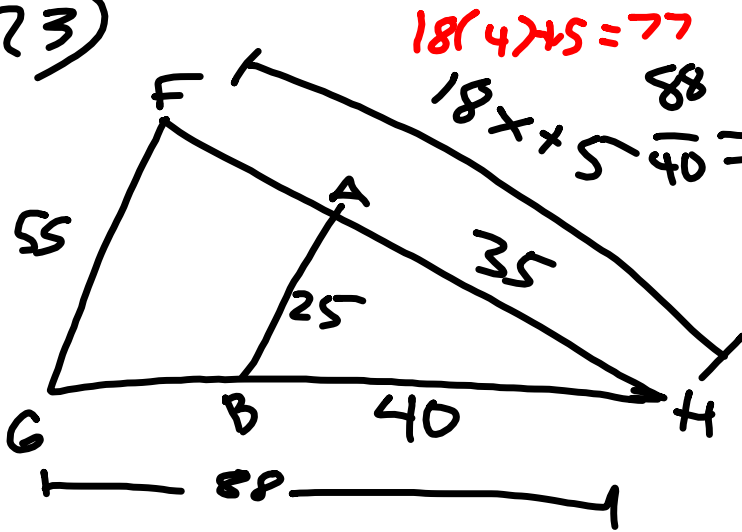
&

Announcements:

October 9th last day for late work and
retakes

Test coming up on this unit Oct 10th

23)



$$18(4) + 5 = 77$$

$$18x + 5 = \frac{88}{40}$$

$$= \frac{18x + 5}{35} = \frac{55}{25}$$

$$= \frac{77}{35} = 2.2 \quad \checkmark$$

$$\frac{18x + 5}{35} = \frac{2.2}{1}$$

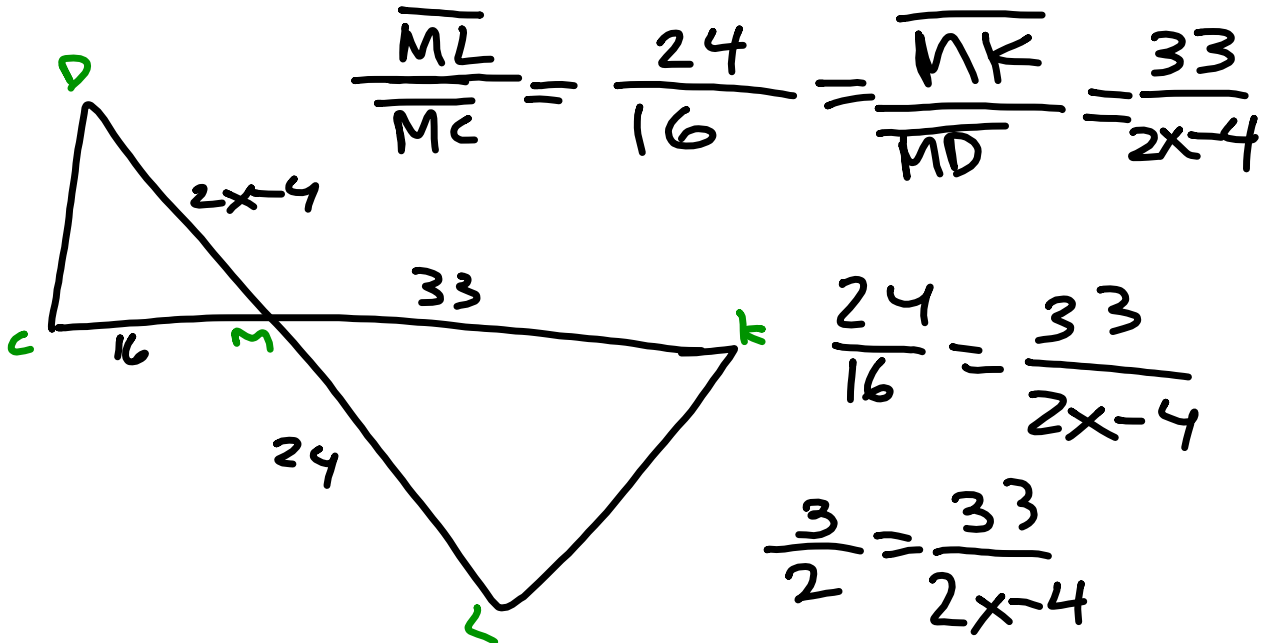
$$\frac{18x}{18} = \frac{72}{18}$$

$$x = 4$$

$$18x + 5 = 35(2.2)$$

$$\begin{array}{r} 18x + 5 = 77 \\ -5 \quad -5 \end{array}$$

20) $\triangle MLK \sim \triangle MCD$



$$\frac{\overline{ML}}{\overline{MC}} = \frac{24}{16} = \frac{\overline{MK}}{\overline{MD}} = \frac{33}{2x-4}$$

$$\frac{24}{16} = \frac{33}{2x-4}$$

$$\frac{3}{2} = \frac{33}{2x-4}$$

$$3(2x-4) = 2 \cdot 33$$

$$6x - 12 = 66$$

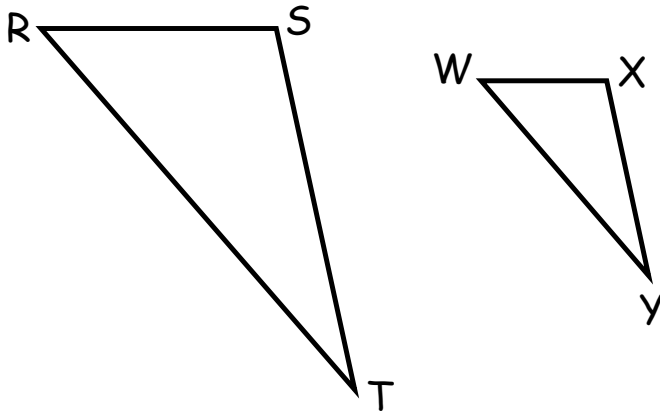
$$6x = 78$$

$$x = 13$$

In two similar figures all corresponding angles are congruent and corresponding sides are proportional.

Identify all of the corresponding congruent angles and all of the corresponding proportional sides using the similar triangles shown.

$$\triangle RST \sim \triangle WXY$$



2-3 Triangle Similarity Theorems

• AA
• SAS
• SSS

Objective: I can determine whether triangles are similar by using triangle similarity theorems AA, SSS, or SAS.

Remember back in the day- triangle congruence theorems?

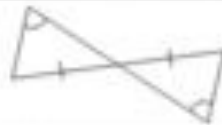
SSS

SSS



AAS

AAS



ASA

ASA

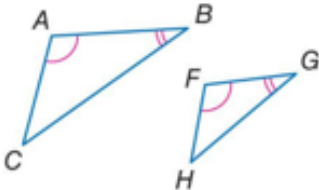
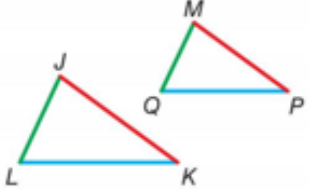
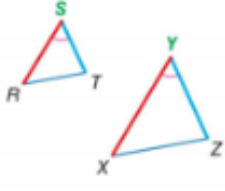


SAS

SAS



Triangle Similarity Theorems

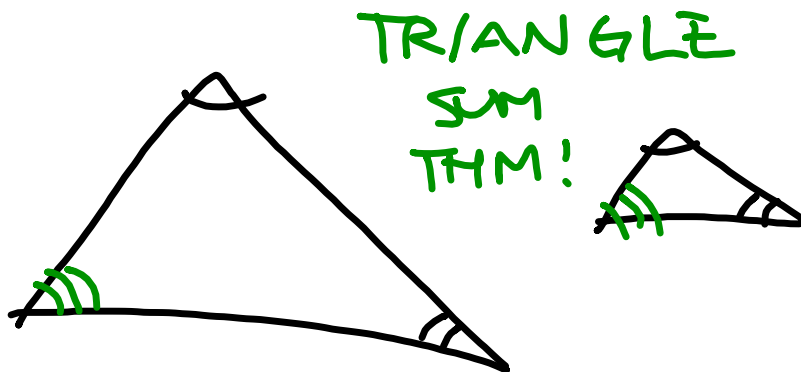
AA	
SSS	
SAS	

Corresponding
 \angle 's \cong

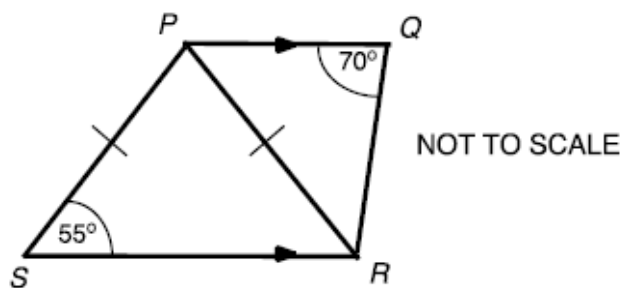
Corresponding
 Sides proportional

Sides proportional
 angle congruent

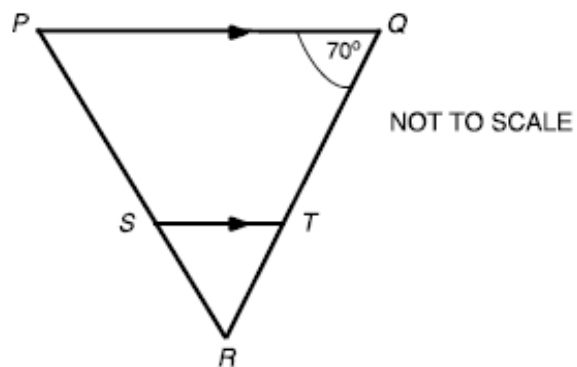
Explain why this similarity theorem is Angle-Angle instead of Angle-Angle-Angle .



Are triangles PQR and SPR similar?

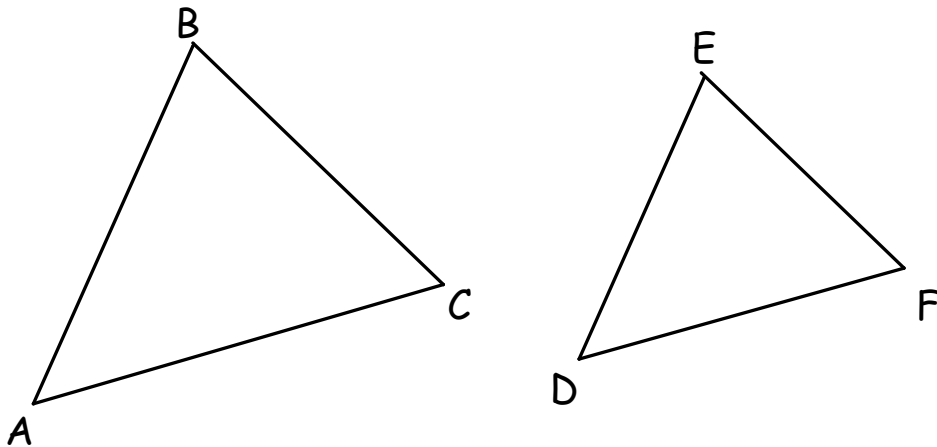


Are triangles PQR and STR similar?



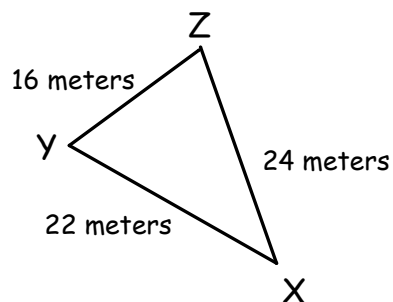
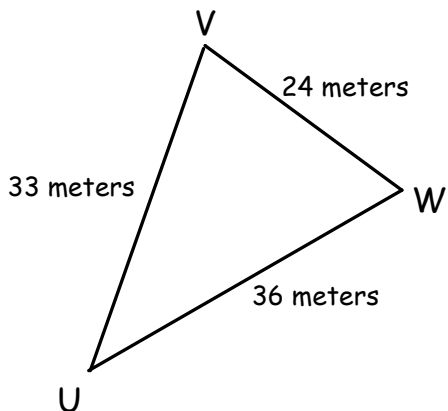
Side-Side-Side Similarity Theorem:

If all three corresponding sides of two triangles are proportional, then the triangles are similar .



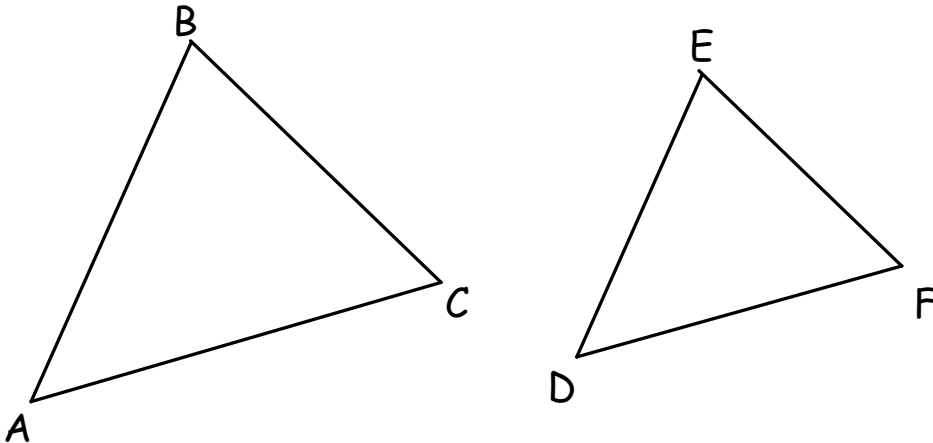
$$\text{If } \frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF}, \text{ then } \triangle ABC \sim \triangle DEF$$

Determine whether $\triangle UVW$ is similar to $\triangle XYZ$. If so, use symbols to write a similarity statement.



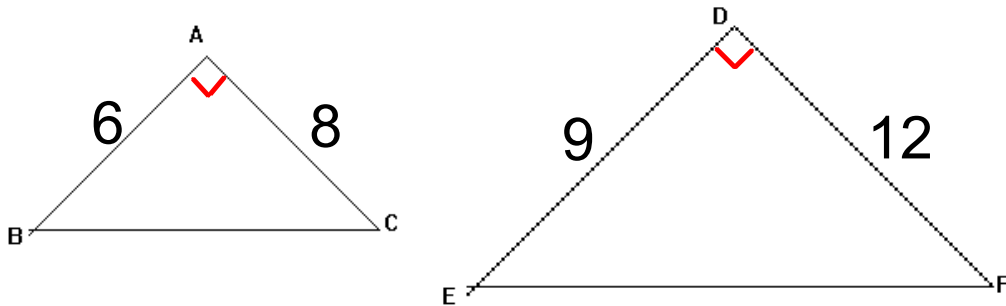
Side-Angle-Side Similarity Theorem:

If two of the corresponding sides of two triangles are proportional and the included angles are congruent, then the triangles are similar .



$$\text{If } \frac{AB}{DE} = \frac{AC}{DF} \text{ and } \angle A \cong \angle D, \text{ then } \triangle ABC \sim \triangle DEF$$

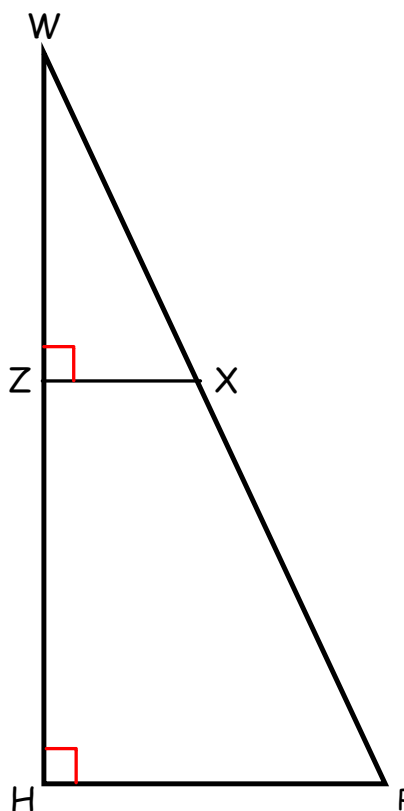
Determine whether $\triangle ABC$ is similar to $\triangle DEF$. If so, what is the scale factor? Name the theorem that can be used to prove they are similar.



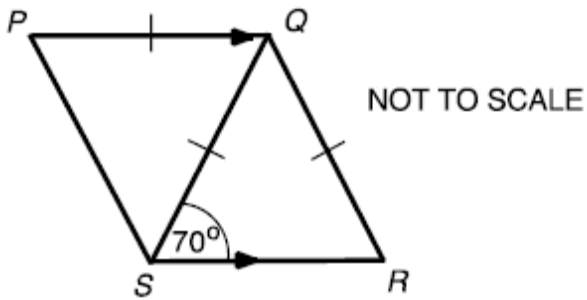
Are triangles WZX and WHP similar?

Explain.

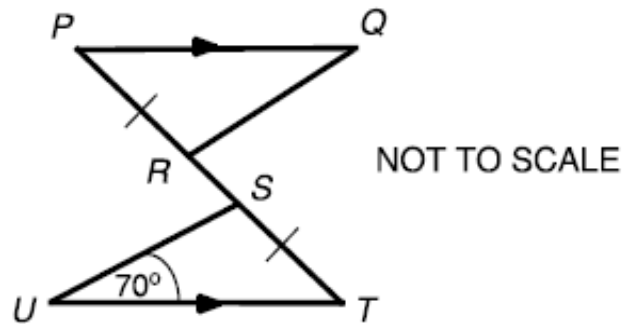
If yes, write a similarity statement.



Are triangles PQS and QRS similar?

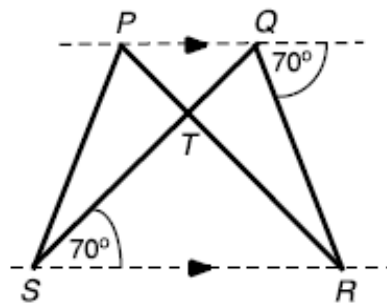


Are triangles PQR and STU similar?

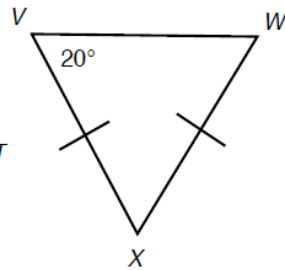
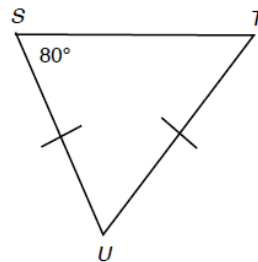
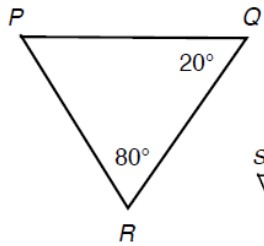


Pass out HW, I'll do some examples like the homework problems.

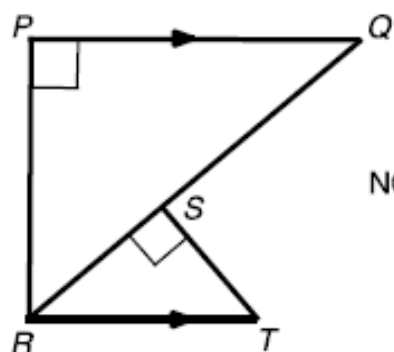
Are triangles PRS and QRS similar?



NOT TO SCALE

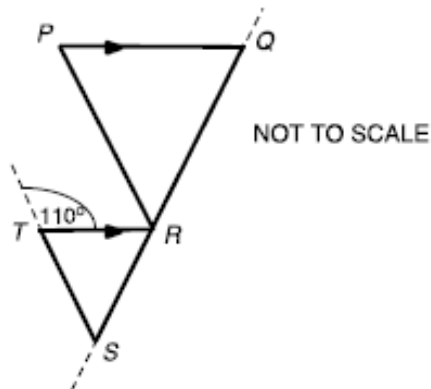


Are triangles PQR and STR similar?



NOT TO SCALE

Are triangles PQR and TRS similar?



NOT TO SCALE