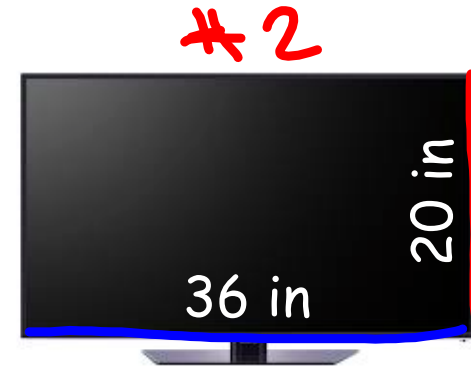


1/21/20 - Warm Up Problem

Which TV screen is a similar rectangle to the movie screen?
What is the scale factor?



$$540 \div 36 = 15$$
$$300 \div 20 = 15$$

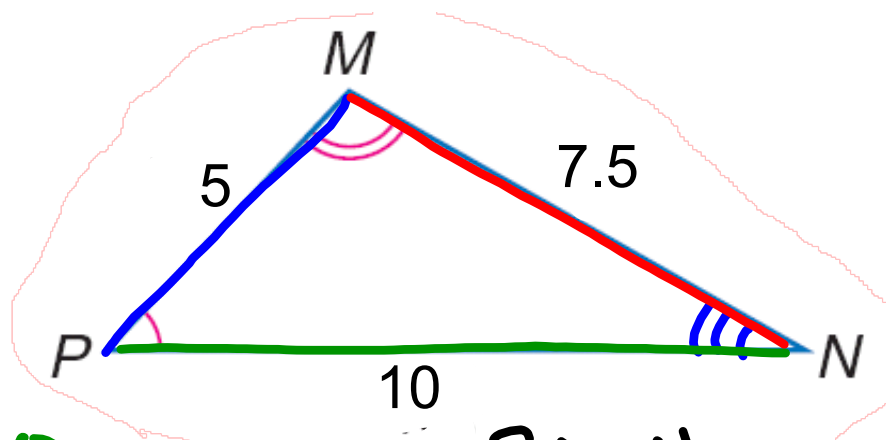
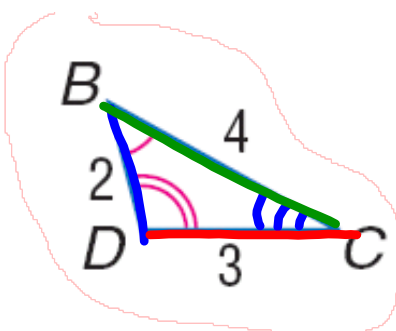


Section 7.3 - Proving Triangles Similar

Goals: Identify similar triangles

Use similar triangles to solve problems

Are these similar triangles?



$$\frac{5}{2} = 2.5$$

$$\frac{7.5}{3} = 2.5$$

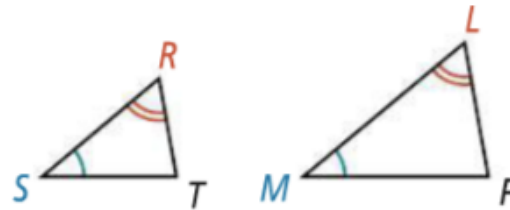
$$\frac{10}{4} = 2.5$$

Similar
Scale Factor: 2.5

Shortcuts for Determining if Triangles are Similar

ANGLE-ANGLE SIMILARITY POSTULATE (AA~)

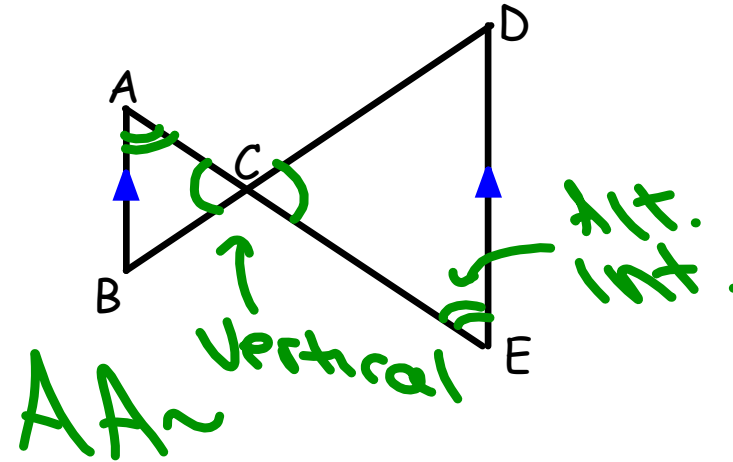
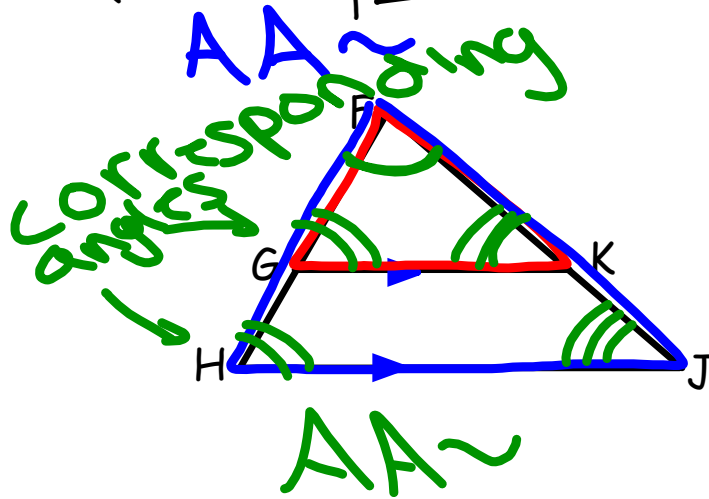
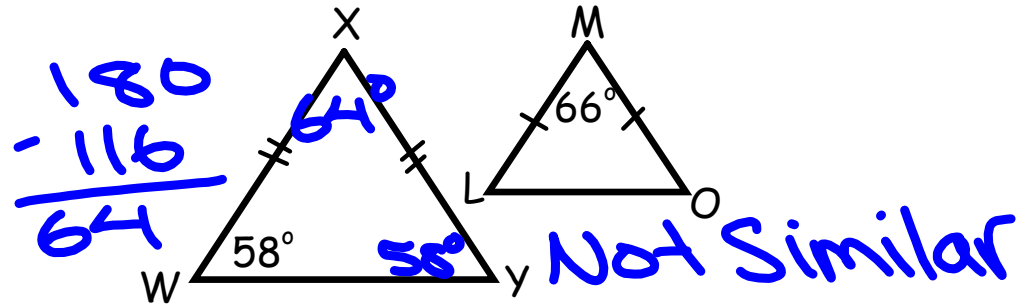
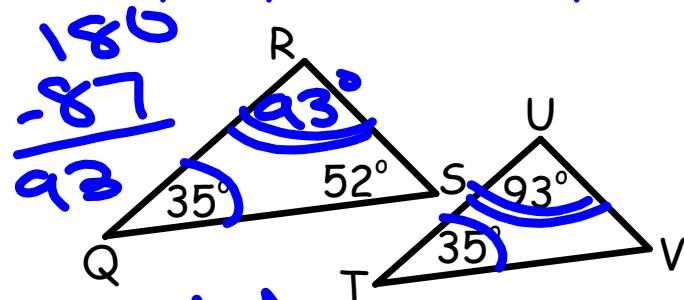
If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.



$$\Delta SRT \sim \Delta MLP$$

by AA~

Can you prove each pair of triangles is similar using AA?



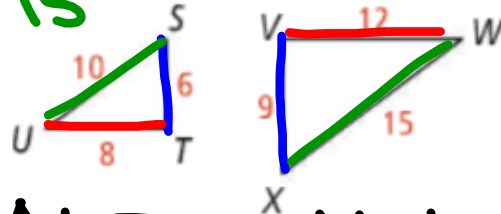
Shortcuts for Determining if Triangles are Similar

SIDE-SIDE-SIDE SIMILARITY THEOREM (SSS~)

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

$$\frac{9}{6} = .6 \quad \frac{8}{12} = .6$$

$$\frac{10}{15} = .6$$



$\Delta UTS \sim \Delta WXV$
by SSS~

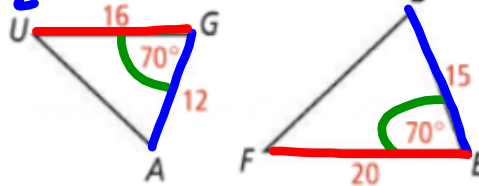
Shortcuts for Determining if Triangles are Similar

SIDE-ANGLE-SIDE SIMILARITY THEOREM (SAS~)

If one angle of one triangle is congruent to one angle of another triangle and the sides including those angles are proportional, then the triangles are similar.

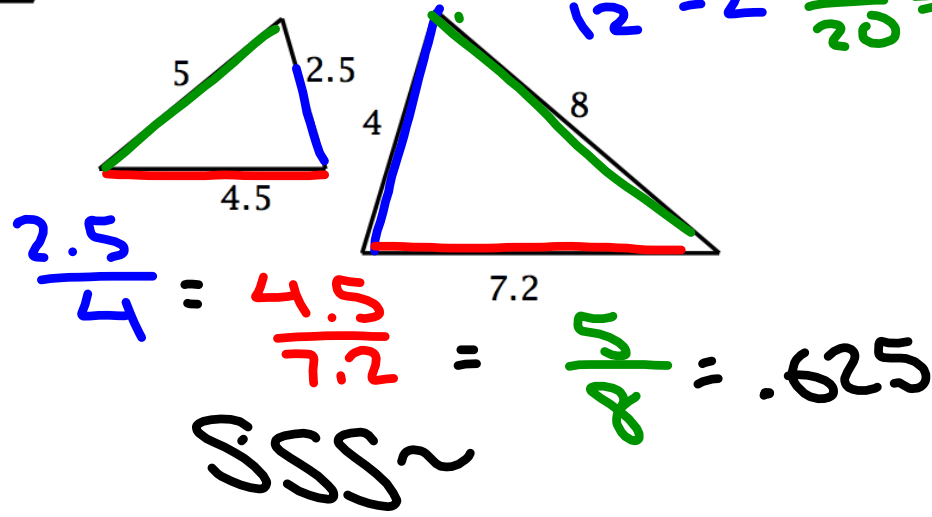
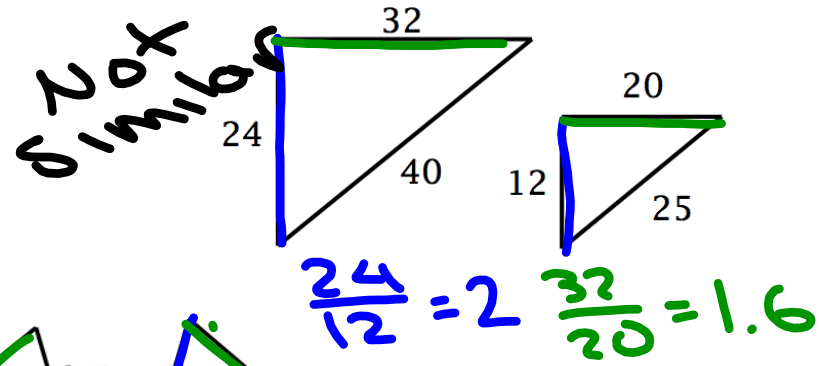
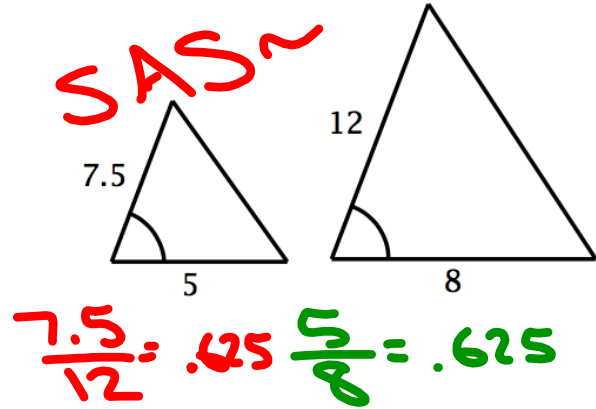
$$\frac{15}{12} = 1.25$$

$$\frac{20}{16} = 1.25$$



$\triangle UGA \sim \triangle FEB$
BY SAS~

Determine whether each pair of triangles can be proven similar by **SSS**, or **SAS**.



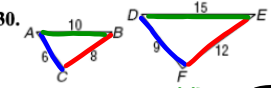
Assignment:

Concept 17 Worksheet

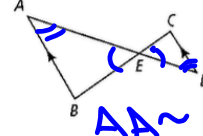
-last page and anything other parts you need to finish

PROVING TRIANGLES ARE SIMILAR

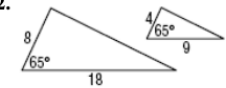
Determine whether each pair of triangles is similar. Name which postulate proves it. If they are not similar write "not similar."


30. 

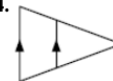
$\frac{6}{9} = \frac{2}{3}$ $\frac{8}{12} = \frac{2}{3}$ $\frac{10}{15} = \frac{2}{3}$
SSS ~

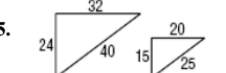
31. 

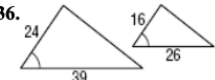
AA ~


32. 

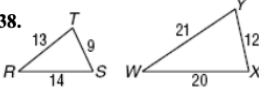
33. 

34. 

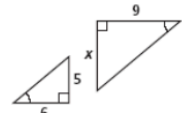
35. 

36. 

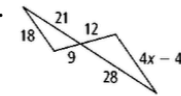
37. 

38. 


Each pair of triangles is similar. Write and solve a proportion to find the value of x.

39. 

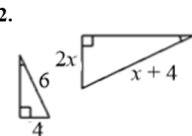
x = _____

40. 

x = _____

41. 

x = _____

42. 

x = _____