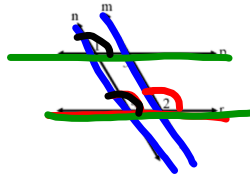


Bell Ringer

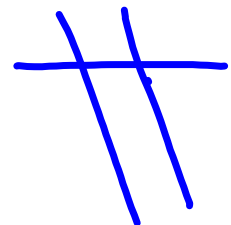
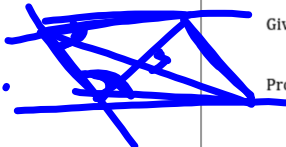
Tuesday 2/12

1. Which of these statements is true for all parallelograms?
- a. Consecutive angles are supplementary
 - b. Diagonals are congruent
 - c. Diagonal bisectors are perpendicular
 - d. All sides are congruent
 - e. All options

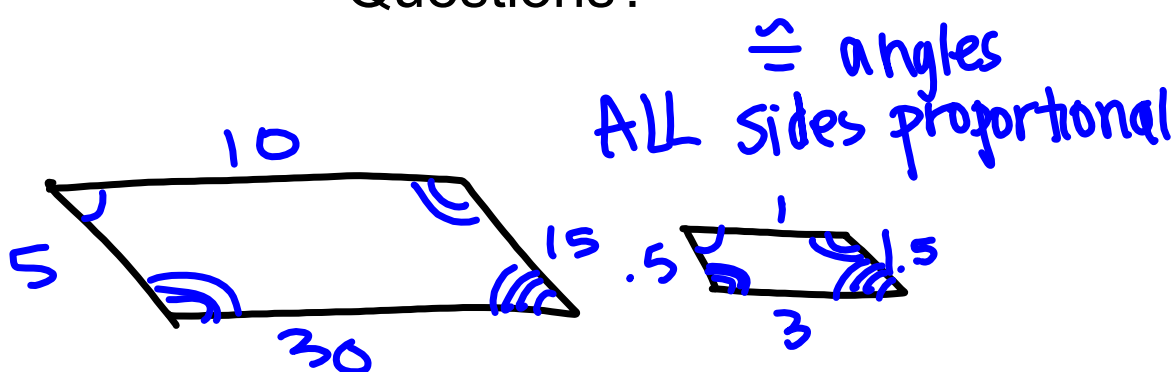
Given: $n \parallel m$
 $\angle 1 \cong \angle 2$
 Prove: $p \parallel r$



Statements	Reasons
2. $n \parallel m$ $\angle 1 \cong \angle 2$	Given
4. $\angle 4 \cong \angle 2$ $\angle 1 \cong \angle 4$	3. Given If two lines are \parallel , then <u>corresponding</u> \angle 's are \cong
$p \parallel r$	5. Transitive 6. converse of corresp. \angles thm If corresp. \angle s \cong , then lines are \parallel



due tomorrow 10.2 Similar Polygons ws
Questions?



Secondary Math 2

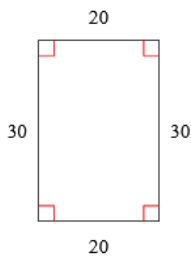
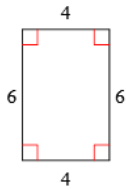
Name _____

10.2 Similar Polygons

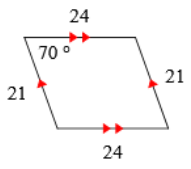
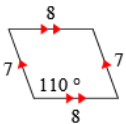
Date _____ Hour _____

State if the polygons are similar.

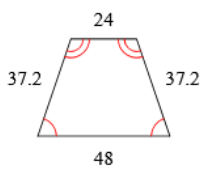
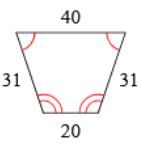
1)



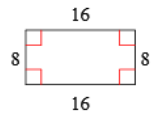
3)



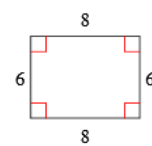
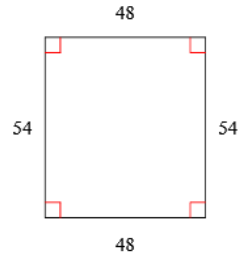
5)



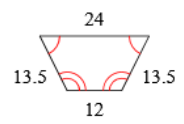
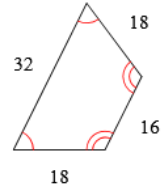
2)



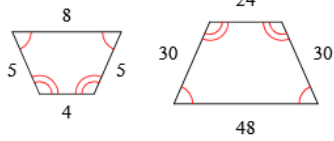
4)



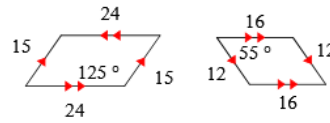
6)



7)

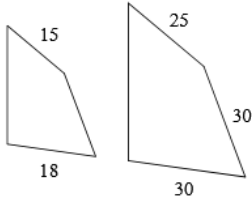


8)

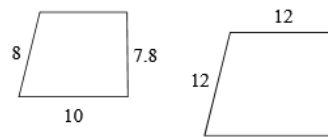


The polygons in each pair are similar. Find the scale factor of the smaller figure to the larger figure.

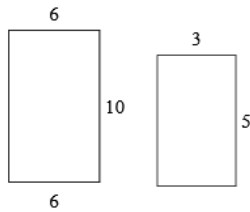
9)



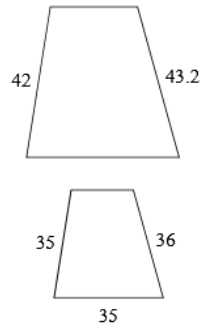
10)



11)

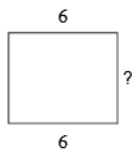


12)

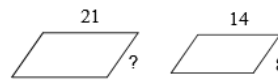


The polygons in each pair are similar. Find the missing side length.

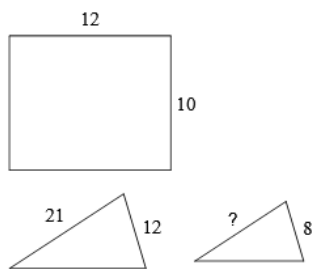
13)



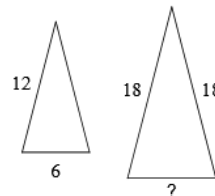
14)



15)



16)



Similar Triangles...

Same shape, not the same size

Corresponding angles are congruent

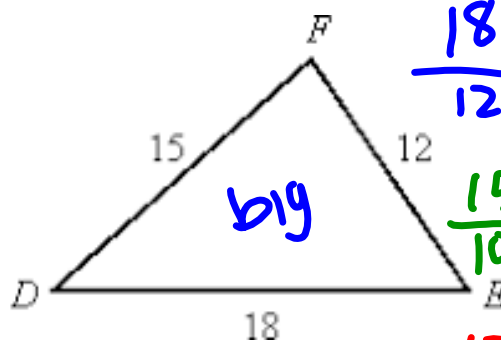
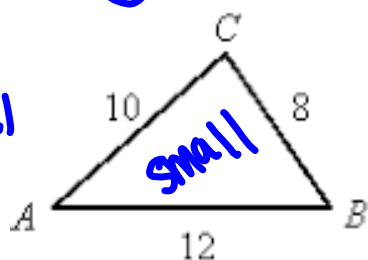
Corresponding sides are proportional

Proving Triangle Similarity

SSS
similarity

If 3 sets of corresponding sides are proportional, then the triangles are similar. ✓

big
small

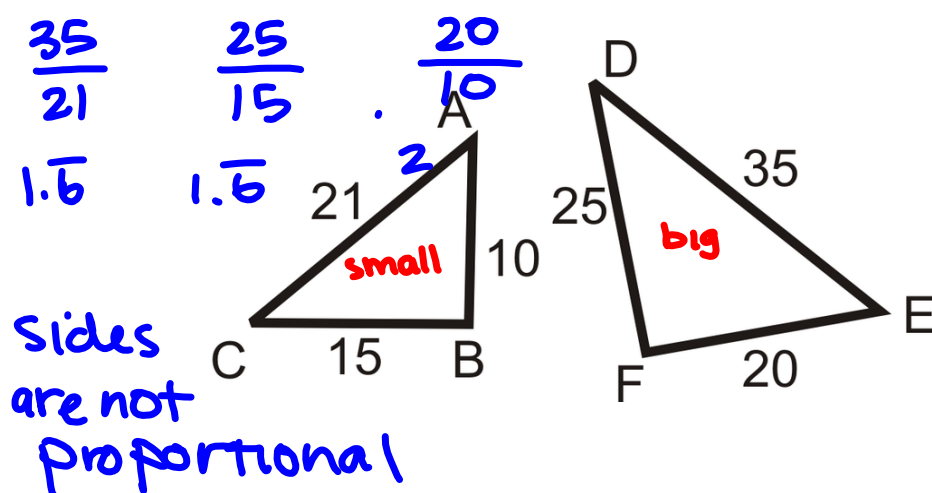


$$\frac{18}{12} = 1.5$$

$$\frac{15}{10} = 1.5$$

$$\frac{12}{8} = 1.5$$

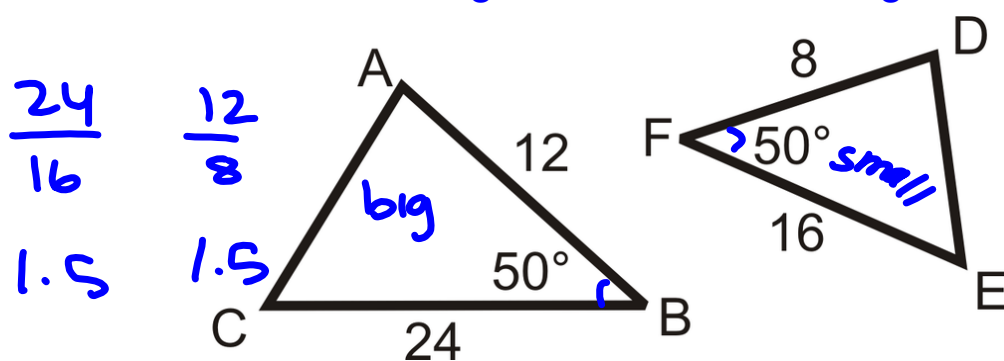
Are the triangles similar?



SAS

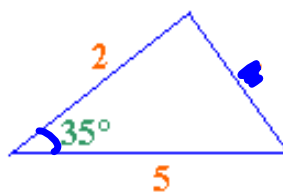
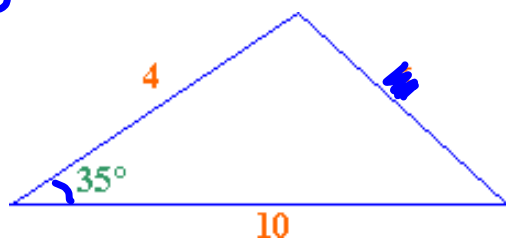
Proving Triangle Similarity

If 2 sets of corresponding sides are proportional, and the angle between them is congruent, then the triangles are similar.



Are the triangles congruent??

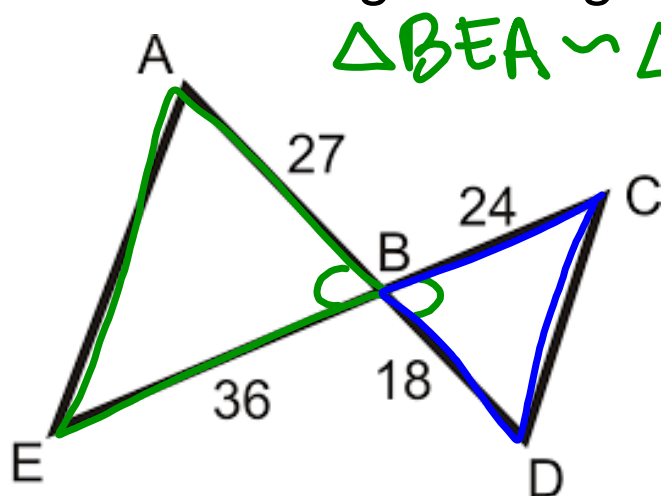
Sides proportional
Angle =
S



$$\therefore \frac{4}{2} = 2 \quad \frac{10}{5} = 2$$

$$\frac{4}{5} \quad \frac{5}{2}$$

Are the triangles congruent?



$\triangle ABE \sim \triangle BCD$ by SAS

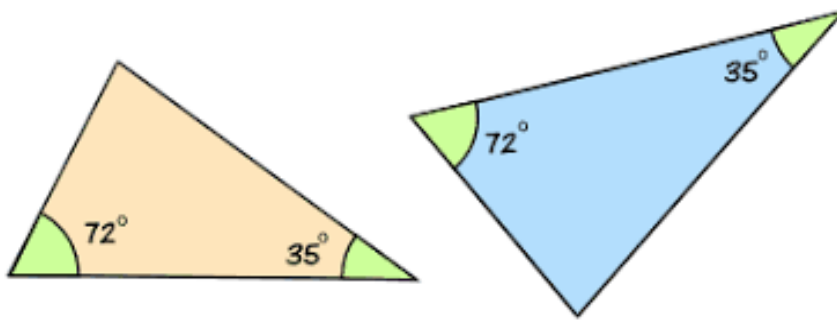
$$\frac{36}{24} = 1.5$$

$$\frac{27}{18} = 1.5$$

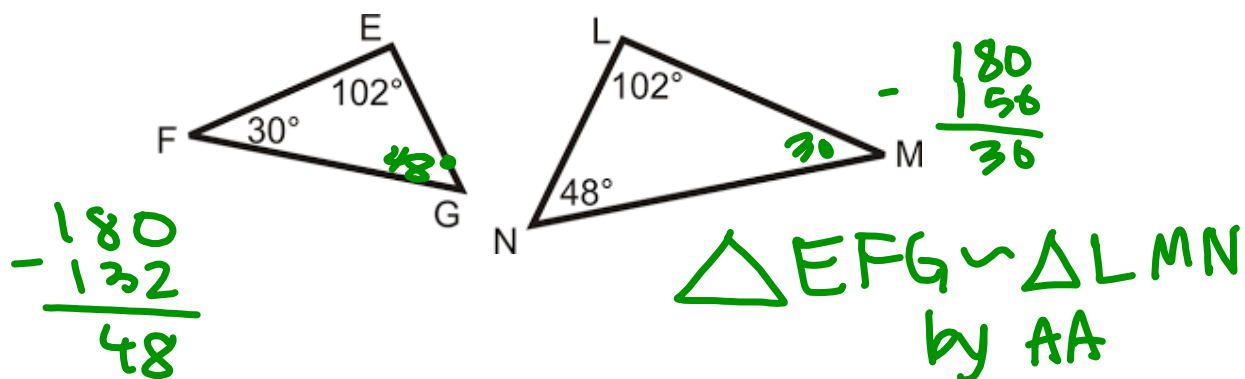
AA

Proving Triangle Similarity

If two pairs of corresponding angles are congruent, then the triangles are similar.



Are the triangles similar?



ACTIVITY

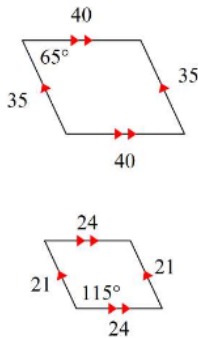
due Thursday

10.3 Triangle Similarity

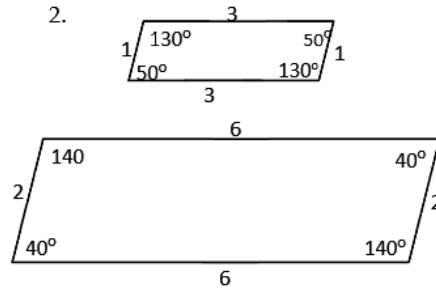
Name _____ Hour _____

Review, state whether each of the following illustrates two similar figures. How do you know?

1.



2.



For questions 3 - 6, $\triangle PLU \sim \triangle ABC$.

Given a length for AB Find what the lengths of AC and BC would be.

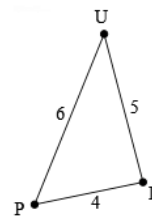
3.

AB = 1
AC = 1.5
BC = 1.25



4.

AB = 3
AC = ____
BC = ____



Handwritten notes: $\frac{BC}{x} = \frac{4}{5}$ and $\frac{5x}{4} = \frac{4}{5}BC$

5.

AB = 4
AC = ____
BC = ____

6.

AB = x
AC = 1.5x
BC = 1.25x

Handwritten notes: $\frac{AC}{x} = \frac{6}{4}$ and $\frac{6x}{4} = \frac{4}{4}AC$

$\triangle CAT \sim \triangle DOT$. Complete each statement.

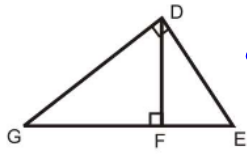
7. $\angle C \cong \angle D$ 8. $\angle CTA \cong \angle DTO$ 9. $\angle DTO \cong$ _____
 10. $\angle A \cong \angle O$ 11. $\angle D \cong$ _____ 12. $\angle O \cong$ _____

13. How does the SSS and SAS postulate for similar triangles differ from the SSS and SAS postulate for congruent triangles?

14. What is the AA postulate for similar triangles?

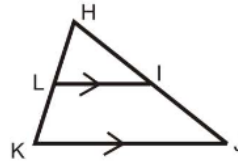
Are the following triangles similar? If so, write a similarity statement. If not, give your reasoning why.

15.

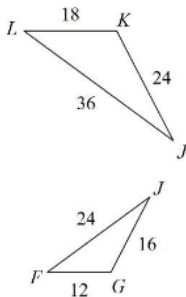


$\triangle \sim \triangle$
by

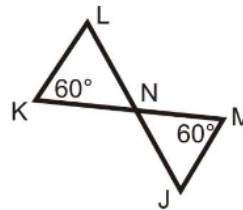
16.



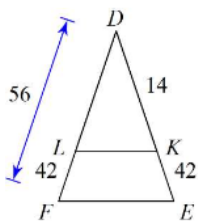
17.



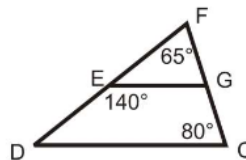
18.



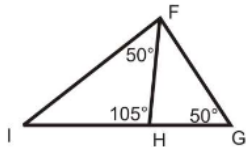
19.



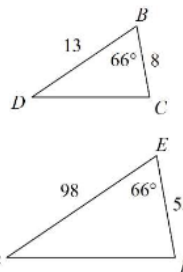
20.



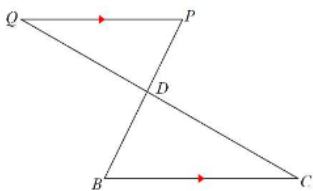
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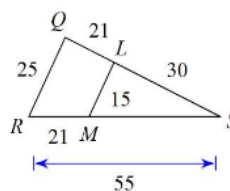
22.



23.

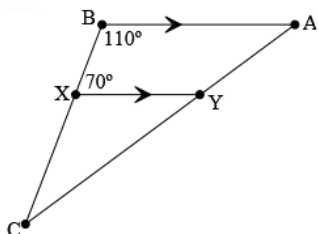


24.

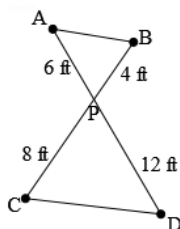


Determine whether each pair of triangles is similar or not. If they are similar right a similarity statement.

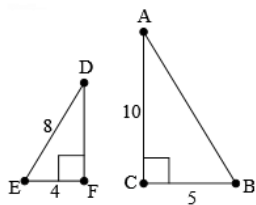
25.



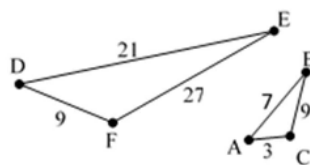
26.



27.



28.



29. The shapes are similar. Find segment lengths for CB and EF, and find x and y.

