

6.1 Similar Figures

NOTES

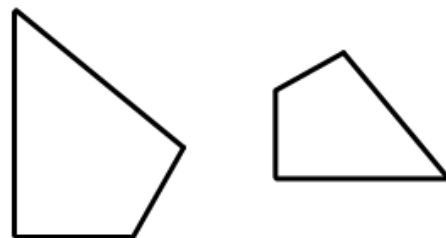
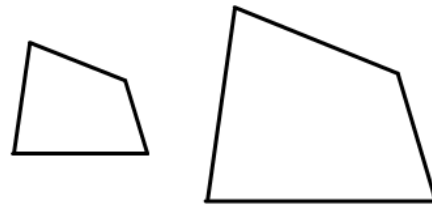
Write your questions here!



Similar Figures –

Similar Polygons		
Definition Two polygons are similar polygons if corresponding angles are	Picture <i>SIMA ~ LURE</i>	Symbols

Corresponding Parts!

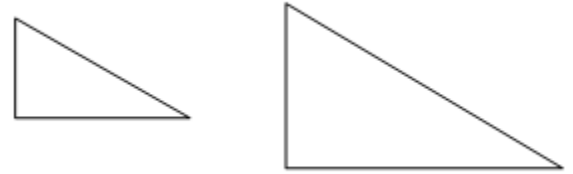
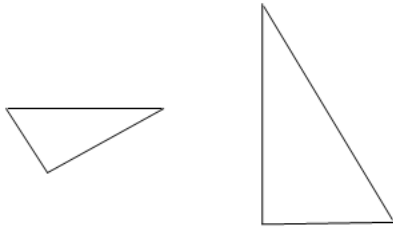


Scale Factor =

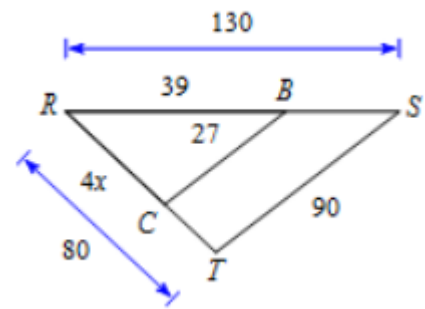
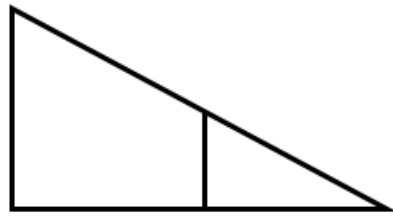
Write your questions here!



Find x !



Overlapping Triangles!



Summarize your notes!

6.1 PRACTICE

Draw the following. Mark the congruent angles!

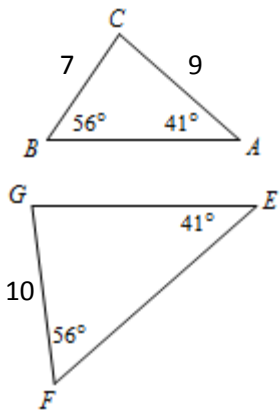
1. $\triangle ABC \sim \triangle DEF$

2. $\square DORK \sim \square FEST$

3. Kite $SULY \sim$ Kite $TIME$

The following triangles are similar. Fill in the blank (order is important). Find the scale factor.

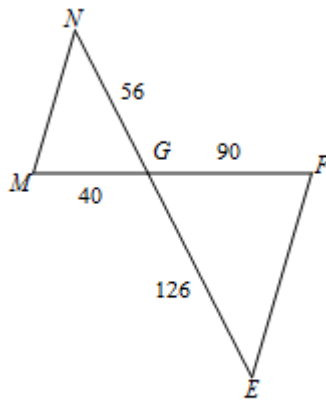
4.



$\triangle EFG \sim$ _____

Scale Factor =

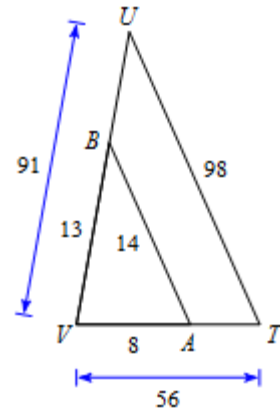
5.



$\triangle GFE \sim$ _____

Scale Factor =

6.

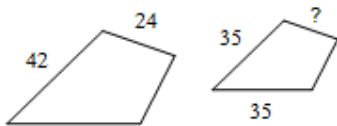


$\triangle VUT \sim$ _____

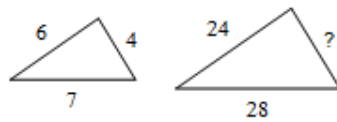
Scale Factor =

The polygons are similar. Find the missing length.

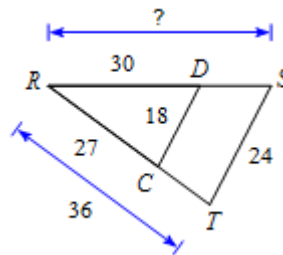
7.



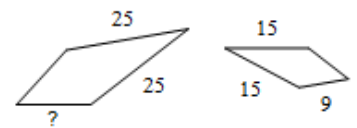
8.



9.



10.



The following polygons are similar. Find x .

11.

12.

13.

14.

15.

16.

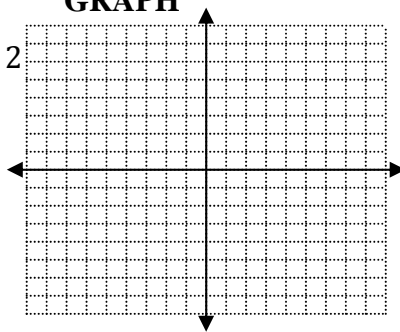
ALGEBRA REVIEW

SOLVE

$$2x^2 = 32$$

GRAPH

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



MULTIPLY

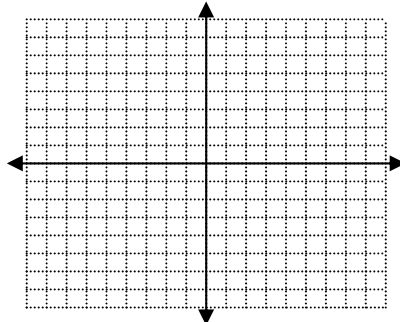
$$(x - 3)(x + 3)$$

SOLVE

$$x^2 + 5 = 30$$

GRAPH

$$y = x + 2$$

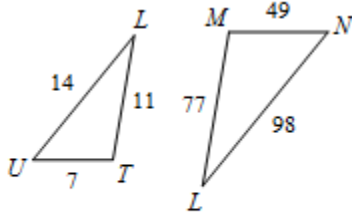


FACTOR

$$x^2 + 7x + 12$$

6.1 APPLICATION

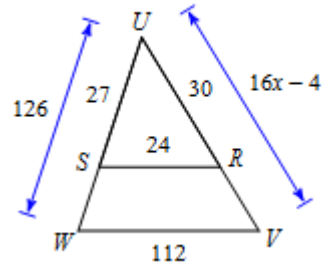
1. The following are similar. Fill in the blank and state the scale factor.



$\triangle LMN \sim$ _____

Scale Factor =

2. Find x .



RICH TASK – FLOODLIGHTS!

The following is a rich task to help you get ready for soccer. Take the facts below and answer the questions on the back of this sheet. You will be assessed on your ability to communicate your ideas. Use all of your mathematical knowledge to help you answer the question (not simply the concepts presented in this packet).

Facts:

- ✓ Johanna is playing soccer.
- ✓ She is 5 feet tall.
- ✓ She stands exactly half way between two floodlights.
- ✓ The floodlights are 12 yards high and 50 yards apart.
- ✓ The floodlights give Johanna two shadows, falling in opposite directions.

1. Draw a diagram to represent this situation. Label your diagram with the measures.

2. Find the total length of Johanna's shadows. Explain your reasoning in detail.

3. Suppose Johanna walks in a straight line towards one of the floodlights. Figure out what happens to the total length of Johanna's shadows. Explain your reasoning in detail.