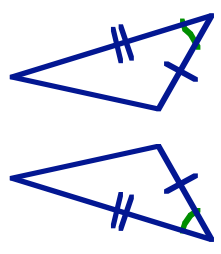**Chapter 5:** Similarity
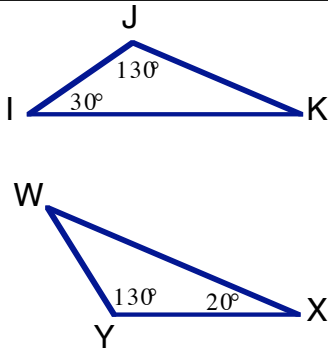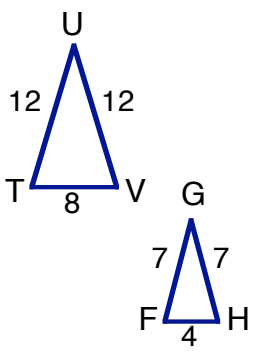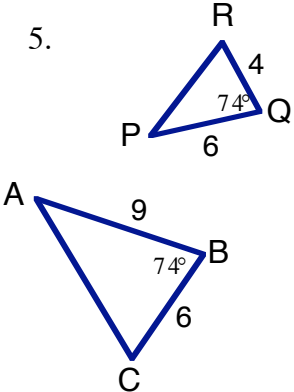**Lesson 5-3:** Similar Triangles
**Homework**

Name: _____
Date: _____
Period: _____

Determine whether the following pairs of triangles are similar. If the triangles are similar then state the theorem or postulate. If not, then explain why not.

1.

2.

3.

4.

5.

Identify each statement as true or false. If false, state why.

6. If the measures of the sides of one triangle are 5 times the measures of the sides of a second triangle, the two triangles are similar.

7. If the measures of the sides of one triangle are 1/2 the measures of the sides of a second triangle, the two traingles are similar

8. If two triangles share one angle in common, then the triangles are similar.

9. If the meaqsures of the sides of a triangle are each 3in greater than the measures of the sides of a second triangle, then the triangles are similar.
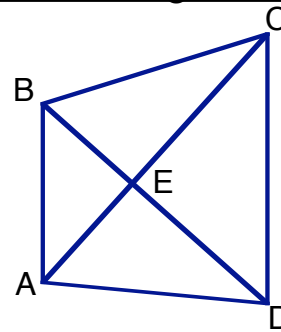
10.

Given $\triangle ABC \sim \triangle EFG$,
AB = 15, BC = 6, and
EF = 5, find FG.
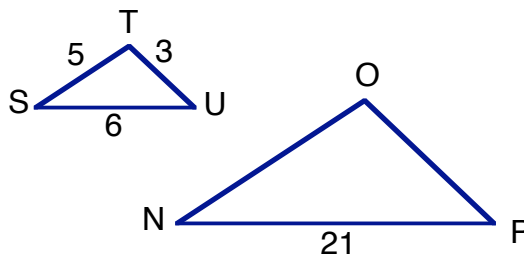
B

6

15

C   E

F

5

G

A
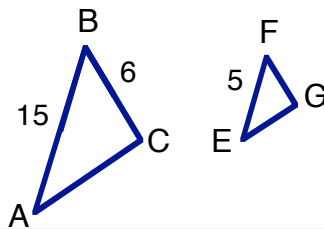
11.

In the figure, $MP = 12$, $OP = 16$, and $NP = 15$.
What value for the measure of $\overline{LP}$ would make
$\triangle MNP$ similar to $\triangle OLP$?

M   N

12 15

P

?   16

L

O

12.
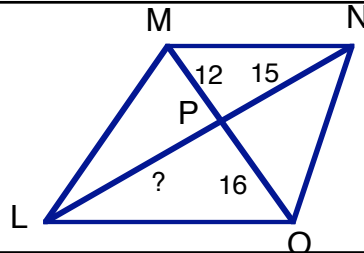
In the quadralateral ABCD,
if AB is parrallel to CD, then
which triangles are similar?
($\triangle ABE$, $\triangle BCE$, $\triangle CDE$, or
$\triangle DAE$)

C

B

E

A

D

13.

If triangles STU and NOP are
similar, then what is the ratio
$\dfrac{TU}{OP}$?

T

5   3

S   U

6

O

N

21   P

14. Using the figures in problem 13 determine the ratio $\dfrac{NO}{ST}$.

15. Using the figures in problem 13 find the measures NO and OP.

16. Identify the similar triangles in the figure. Explain your answer.