

Similarity Unit 7 - Test Review.

Solve each proportion by using cross-products.

1. $\frac{9}{28} = \frac{x}{84}$

2. $\frac{3}{18} = \frac{4x}{7}$

3. $\frac{3}{b+16} = \frac{4}{48}$

4. $\frac{5}{k+17} = \frac{8}{152}$

5. $\frac{x+5}{7} = \frac{x+3}{5}$

Write each ratio in lowest terms.

6. A soccer team played 25 games and won 17.

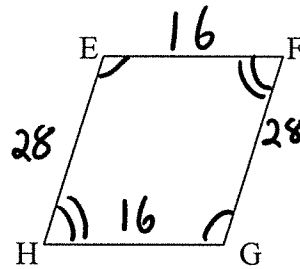
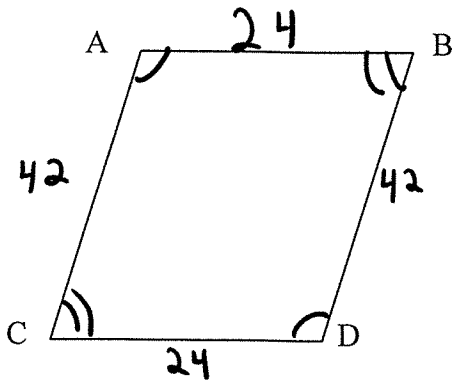
a. What is the ratio of the number of wins to the number of losses?

b. What is the ratio of the number of games played to the number of games won?

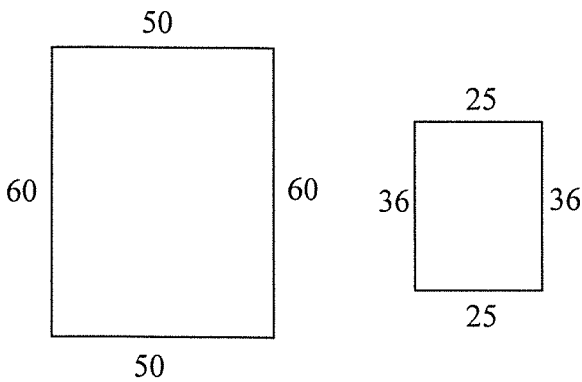
7. In a senior class, there are 260 boys and 120 girls graduating. Express the ratio of the number of boys graduating to the total number in the class.

8. A scale model of a tower is 12 in long. The actual tower is 20 feet long. What is the ratio of the length of the actual tower to the model tower? (12 in = 1 ft)

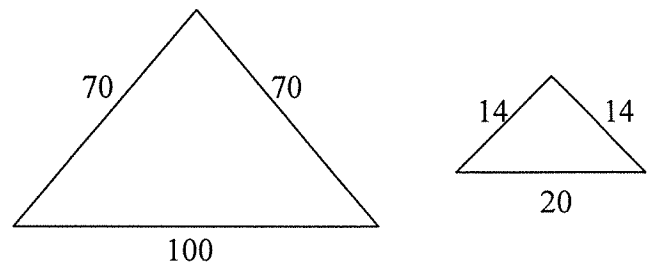
9. Explain why the figures are similar and write the similarity statement.



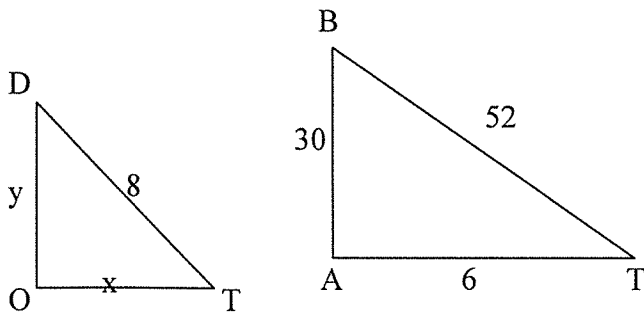
10. **Similar?** yes no
If yes, scale factor (left to right) _____



11. **Similar?** yes no
If yes, scale factor (left to right) _____



12. $\triangle DOT \sim \triangle BAT$



Find x and y

13. $\triangle DEF \sim \triangle RST$

14. $\triangle MNP \sim \triangle SQV$

RS = _____

TR = _____

x = _____

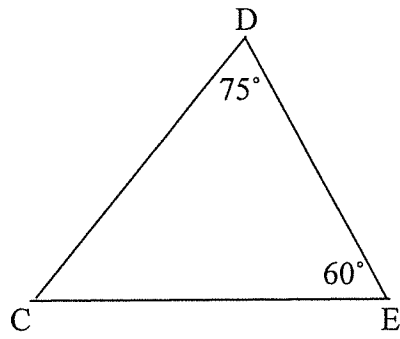
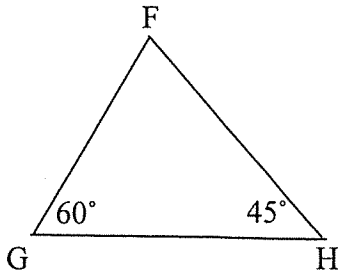
NP = _____

QV = _____

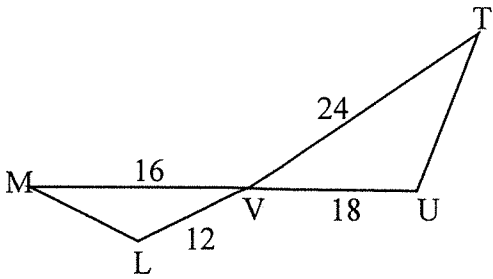
For # 15-17, Determine whether each pair of triangles is similar. If the triangles are similar, justify your answer by using SSS, SAS, and AA. Make sure you have work to support your answer.

15.

16.

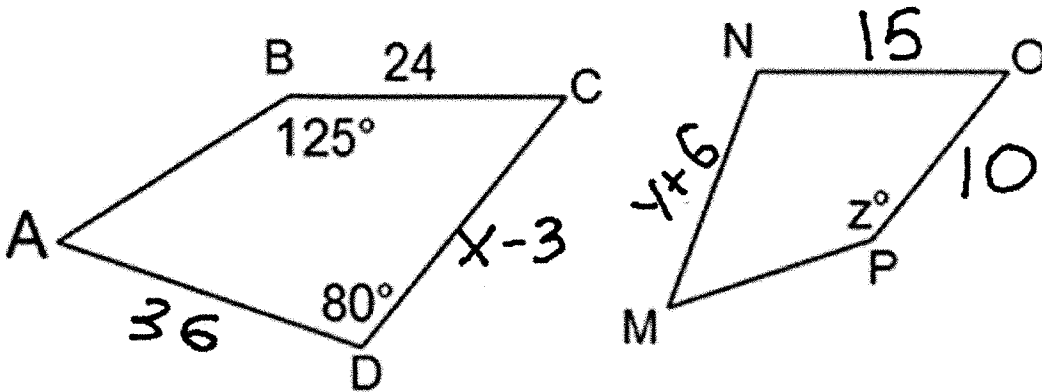


17.



18.

$ABCD \sim MPON$



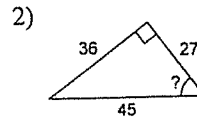
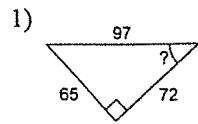
Solve for x and y, z

19. A Girl, 5ft tall, stays in the front of a pole. If the Girl's shadow is 9ft and the pole's shadow is 75ft, how tall is the pole? Draw a picture, set up a proportion, and solve

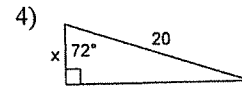
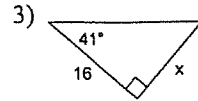
26. Ahmad would like to know how tall a tree is. To find the answer he does the following: places a mirror on the ground 18ft from the tree, he continues to move away from the tree 4ft from the mirror. Now he can see the top of the tree reflected in the mirror. If Ahmad is 6.2 ft tall, how tall is the tree?

Prior Knowledge Review

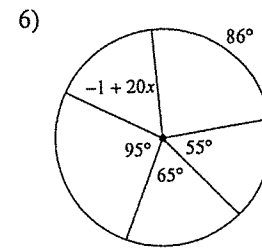
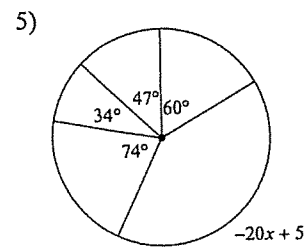
Find the measure of the indicated angle to the nearest degree.



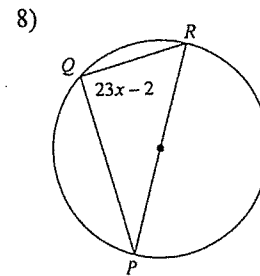
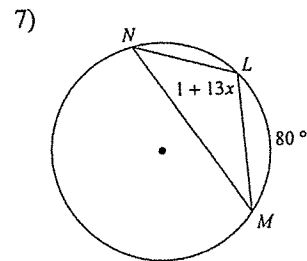
Find the missing side. Round to the nearest tenth.



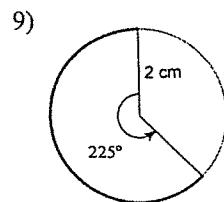
Solve for x . Assume that lines which appear to be diameters are actual diameters.



Solve for x .



Find the length of each arc. Round your answers to the nearest tenth.



Find the area of each sector. Round your answers to the nearest tenth.

