

Name _____ Date _____

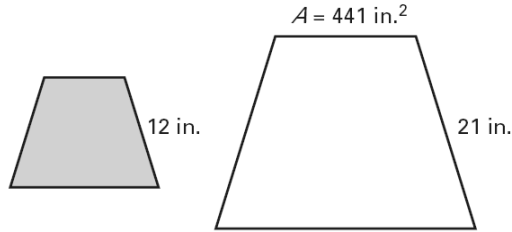
LESSON 11.3

Practice C

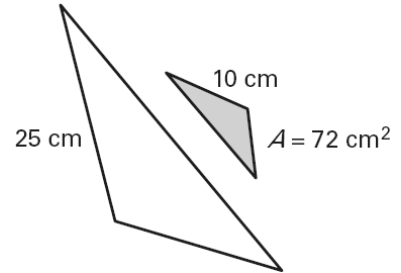
For use with pages 737–743

The polygons are similar. Find the ratio (shaded to unshaded) of the perimeters and of the areas. Find the unknown area.

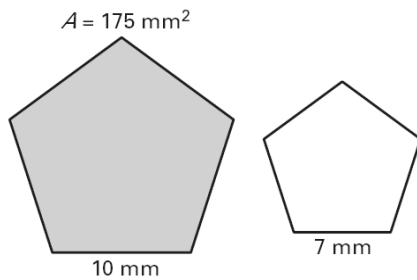
1.



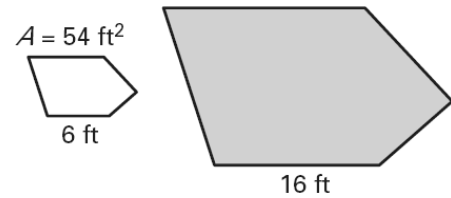
2.



3.



4.



The ratio of the areas of two similar figures is given. Write the ratio of the lengths of corresponding sides.

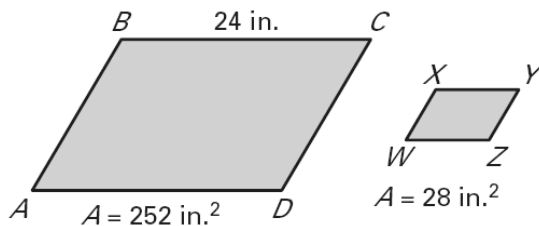
5. Ratio of areas = 169:144

6. Ratio of areas = 112:196

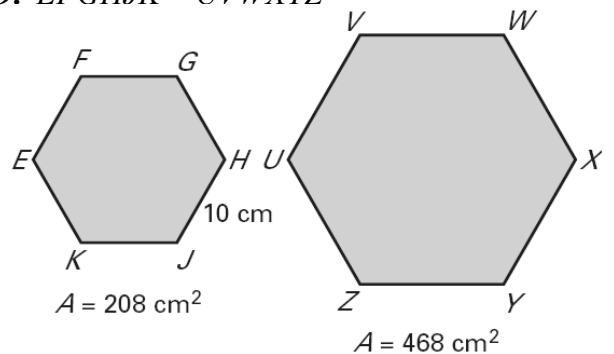
7. Ratio of areas = 125:108

Use the given area to find XY .

8. $ABCD \sim WXYZ$

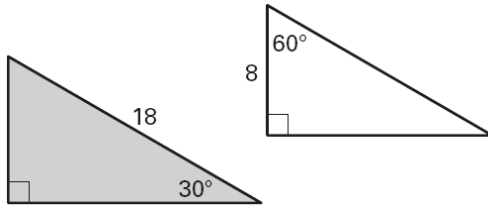


9. $EFGHJK \sim UVWXYZ$

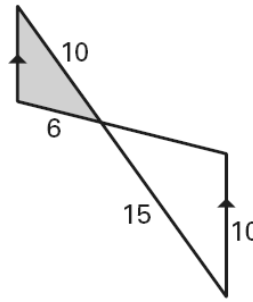


Find the ratio (shaded to unshaded) of the areas.

10.



11.



12. **Area** $\triangle ABC$ and $\triangle DEF$ are similar. The height of $\triangle ABC$ is 30 inches. The base of $\triangle DEF$ is 8 inches and the area is 40 square inches. Find the area of $\triangle ABC$.

13. **Dimensions** The dimensions of a rectangle are 8 centimeters by 12 centimeters. What are the dimensions of a similar rectangle with exactly double the area?

14. **Diagonals** Rhombus $RSTU$ and rhombus $VWXY$ are similar. The area of $RSTU$ is 384 square feet. The diagonals of $VWXY$ are 24 feet long and 18 feet long. Find the area of $VWXY$. Then use the ratio of the areas to find the lengths of the diagonals of $RSTU$. Find the length of a side of $RSTU$.

15. **Area** Regular hexagon $ABCDEF$ has a side length of 8 millimeters and an area of $96\sqrt{3}$ square millimeters. Regular hexagon $JKLMNO$ has a perimeter of 72 millimeters. Find its area.

16. You hire the same lawn service company to mow your home lawn that mows your company lawn. The two lawns are similar rectangles. Your home lawn is 30 feet by 60 feet and your company lawn is 135 feet by 270 feet. You are charged \$90.00 for your home lawn and \$1093.50 for the company lawn. Are you charged the same rate for both lawns? If not, which rate is higher, the home rate or the company rate?