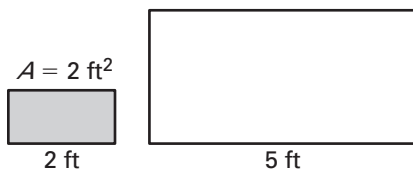


LESSON
11.3**Practice***For use with pages 737–743***Complete the table of ratios for similar polygons.**

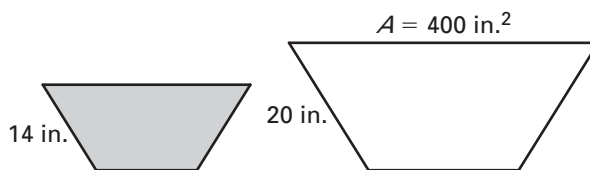
	Ratio of corresponding side lengths	Ratio of perimeters	Ratio of areas
1.	5 : 8		
2.		4 : 7	
3.			169 : 36
4.	66 : 18 = ?		

Corresponding lengths in similar figures are given. Find the ratios (shaded to unshaded) of the perimeters and areas. Find the unknown area.

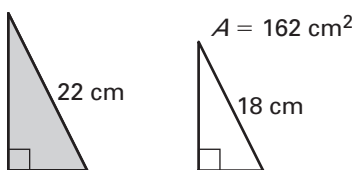
5.



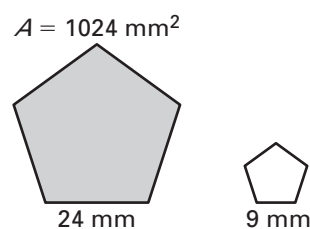
6.



7.



8.

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

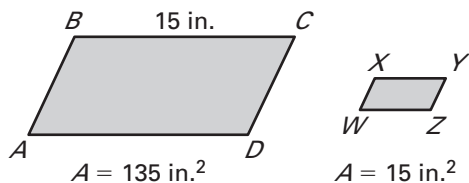
9. Ratio of areas = 16 : 81

10. Ratio of areas = 25 : 196

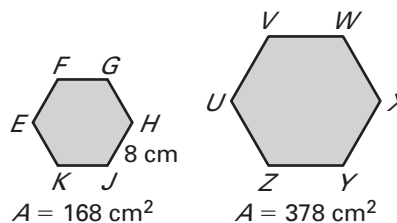
11. Ratio of areas = 144 : 49

LESSON
11.3**Practice** *continued*
For use with pages 737–743**Use the given area to find XY .**

12. $ABCD \sim WXYZ$



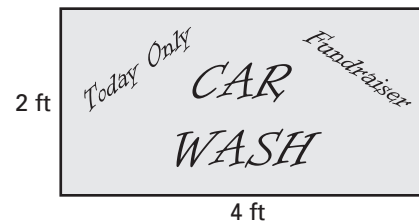
13. $EFGHJK \sim UVWXYZ$



14. Regular octagon $ABCDEFGH$ has a side length of 10 millimeters and an area of 160 square millimeters. Regular octagon $JKLMNOPQ$ has a perimeter of 200 millimeters. Find its area.
15. Kites $RSTU$ and $VWXY$ are similar. The area of $RSTU$ is 162 square feet. The diagonals of $VWXY$ are 32 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 $RSTU$.
16. $\triangle ABC$ and $\triangle DEF$ are similar. The height of $\triangle ABC$ is 42 inches. The base of $\triangle DEF$ is 7 inches and the area is 42 square inches. Find the ratio of the area of $\triangle ABC$ to the area of $\triangle DEF$.
17. Rectangles $ABCD$ and $EFGH$ are similar. The width of $ABCD$ is 18 centimeters and the perimeter is 120 centimeters. The length of $EFGH$ is 91 centimeters. Find the ratio of the side lengths of $ABCD$ to the side lengths of $EFGH$.

LESSON
11.3**Practice** *continued*
For use with pages 737–743

- 18. Posters** Your school had a car wash to raise money. A poster that was used to attract customers is shown. You decide that you will have the car wash again next year. You will have a similar poster but you will increase the length to 6 feet to try to attract more customers. Find the area of the new poster.



- 19. Rug Costs** You are comparing the two rugs shown below. You want to be sure that the large rug is priced fairly. The price of the small rug is \$84. The price of the large rug is \$210.
- a. What are the areas of the two rugs? What is the ratio of the area of the small rug to the area of the large rug?

- b. Compare the rug costs. Do you think the large rug is a good buy? *Explain.*

