

# Independent Practice

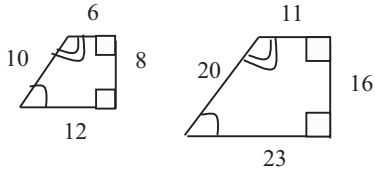
## 9.4

NAME \_\_\_\_\_

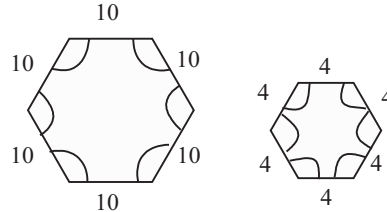
Module 9 Characteristics of Geometric Shapes  
Lesson 4 Similar Polygons

Determine if each pair of polygons is similar. Explain why or why not.

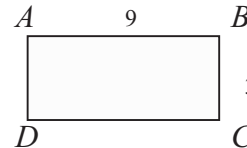
1.



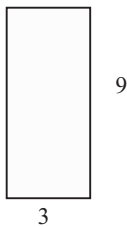
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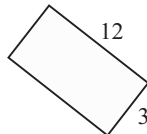
Determine which rectangles are similar to rectangle *ABCD*. Write *yes* or *no*.



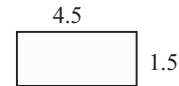
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4.

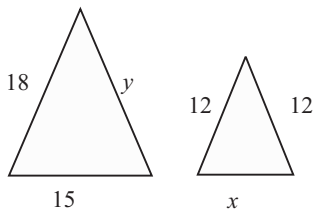


5.

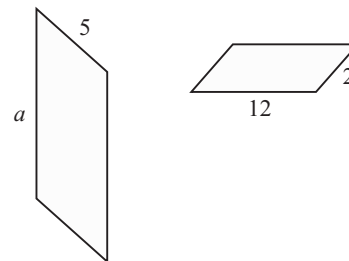


Find the unknown lengths in each pair of similar figures.

6.

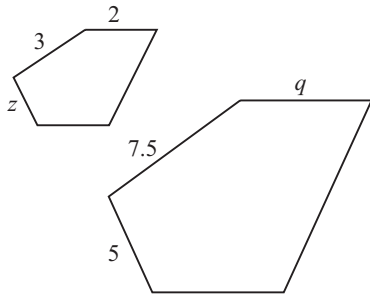


7.

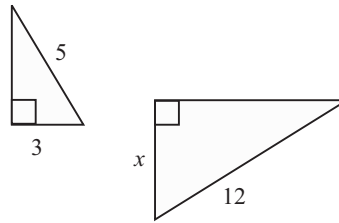


Find the unknown lengths in each pair of similar figures.

8.




9.




10. Juan made an 800% enlargement of a photo of his dog. The width of the original photo is two inches. Find the width of the enlarged photo.

11. A map has a scale of 1 inch to 25 miles. The distance between two cities on the map is 7.5 inches. What is the actual distance between the two cities?

12. Lenora is building a model of Mt. Rushmore using a scale of 1 inch to 275 feet. The finished model has a height of 20 inches. How many feet high is Mt. Rushmore?

13. An overhead projector enlarges an  $8\frac{1}{2}$  inch by 10 inch piece of paper to  $21\frac{1}{4}$  inches by 25 inches. What is the scale factor, written as a percent?

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**Module 9**    **Characteristics of Geometric Shapes**  
**Lesson 4**    **Similar Polygons**

**Journal**

1. Charlie said that if two polygons are similar they are also congruent. Simone said that if two polygons are congruent they are also similar. Who is correct? Justify your answer.
2. Are all squares similar? Explain your answer.
3. How does the value of the scale factor help you determine if the change is a reduction or an enlargement? Explain.

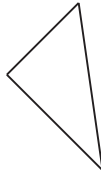
**Cumulative Review**

Tell if each polygon is convex or concave.

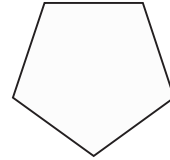
1.



2.



3.



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4. A regular octagon has a perimeter of 32 inches. Find the length of each side.

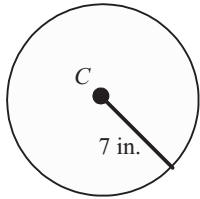
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5. The sum of the measures of the angles of a regular 18-sided polygon is  $2,880^\circ$ . Find the measure of each angle.

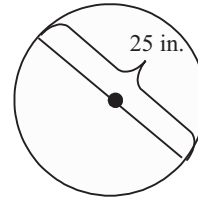
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Find the circumference of each circle to the nearest inch.

6. Circle  $C$

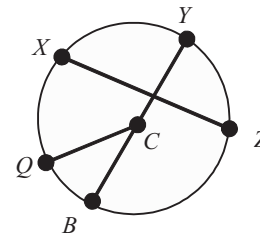


7. Circle  $O$



Circle  $C$  is shown at right.

8. Name all the radii.



9. Name all the diameters.

10. Name all the chords.