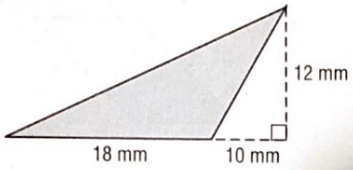
NAME _____ DATE _____ PERIOD _____

11-1 Skills Practice

Areas of Parallelograms and Triangles

Find the perimeter and area of each parallelogram or triangle. Round to the nearest tenth if necessary.

1.



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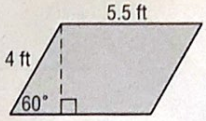

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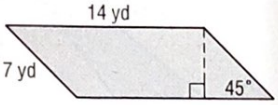

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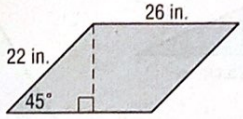

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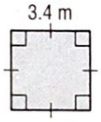

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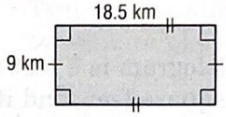

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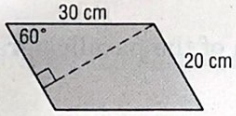

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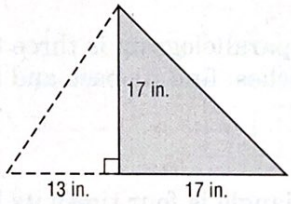


9. The height of a parallelogram is 10 feet more than its base. If the area of the parallelogram is 1200 square feet, find its base and height.

10. The base of a triangle is one half of its height. If the area of the triangle is 196 square millimeters, find its base and height.

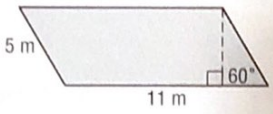
NAME _____ DATE _____ PERIOD _____

11-1 Practice

Areas of Parallelograms and Triangles

Find the perimeter and area of each parallelogram or triangle. Round to the nearest tenth if necessary.

1.



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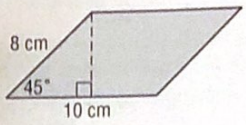

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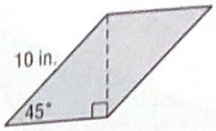

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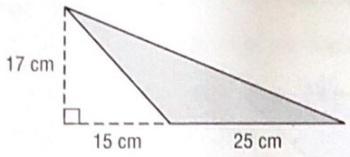

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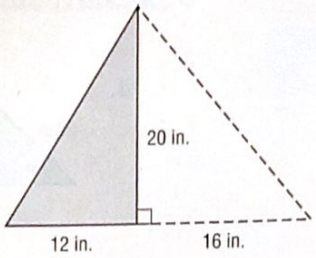

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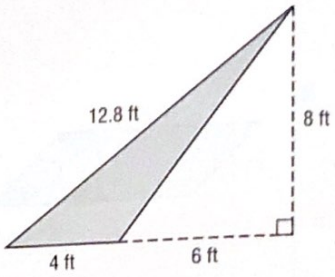


7. The height of a parallelogram is 5 feet more than its base. If the area of the parallelogram is 204 square feet, find its base and height.

8. The height of a parallelogram is three times its base. If the area of the parallelogram is 972 square inches, find its base and height.

9. The base of a triangle is four times its height. If the area of the triangle is 242 square millimeters, find its base and height.

10. FRAMING A rectangular poster measures 42 inches by 26 inches. A frame shop fitted the poster with a half-inch mat border.

a. Find the area of the poster.

b. Find the area of the mat border.

c. Suppose the wall is marked where the poster will hang. The marked area includes an additional 12-inch space around the poster and frame. Find the total wall area that has been marked for the poster.

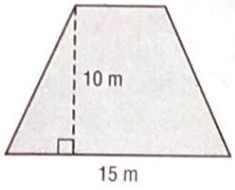
NAME _____ DATE _____ PERIOD _____

11-2 Skills Practice

Areas of Trapezoids, Rhombi, and Kites

Find the area of each trapezoid, rhombus, or kite.

1.



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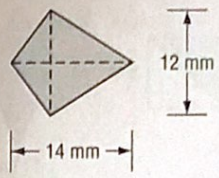

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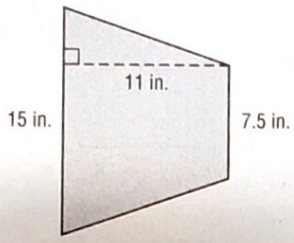
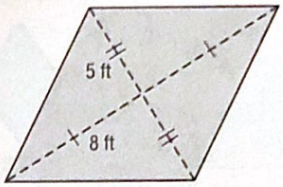


4.



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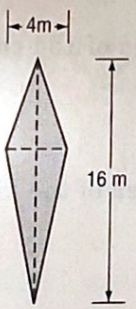

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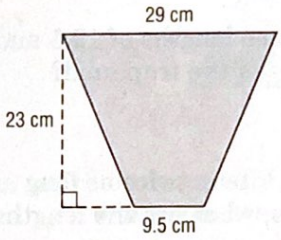


ALGEBRA Find each missing length.

7. A trapezoid has base lengths of 6 and 15 centimeters with an area of 136.5 square centimeters. What is the height of the trapezoid?

8. One diagonal of a kite is four times as long as the other diagonal. If the area of the kite is 72 square meters, what are the lengths of the diagonals?

9. A trapezoid has a height of 24 meters, a base of 4 meters, and an area of 264 square meters. What is the length of the other base?

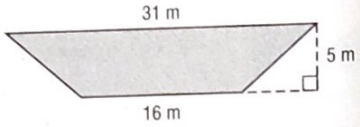
Lesson 11-2

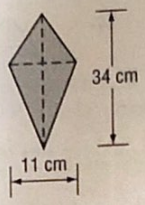
NAME _____ DATE _____ PERIOD _____

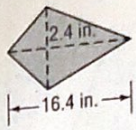
11-2 Practice

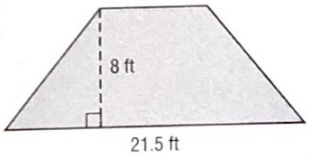
Areas of Trapezoids, Rhombi, and Kites

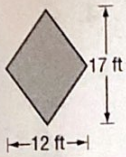
Find the area of each trapezoid, rhombus, or kite.

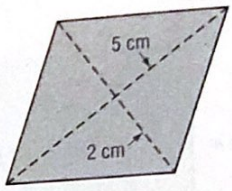
1. 

2. 

3. 

4. 

5. 

6. 

ALGEBRA Find each missing length.

7. A trapezoid has base lengths of 19.5 and 24.5 centimeters with an area of 154 cm^2. What is the height of the trapezoid?

8. One diagonal of a kite is twice as long as the other diagonal. If the area of the kite is 400 square meters, what are the lengths of the diagonals?

9. A trapezoid has a height of 40 inches, a base of 15 inches, and an area of 2400 square inches. What is the length of the other base?

10. **DESIGN** Mr. Hagarty used 16 congruent rhombi-shaped tiles to design the midsection of the backsplash area above a kitchen sink. The length of the design is 27 inches and the total area is 108 square inches.

   a. Find the area of one rhombus.

   b. Find the length of each diagonal.

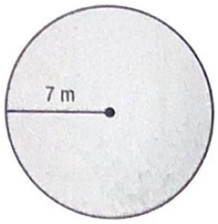
NAME _____ DATE _____ PERIOD _____

11-3 Skills Practice

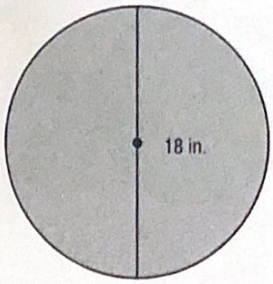
Areas of Circles and Sectors

Find the area of each circle.

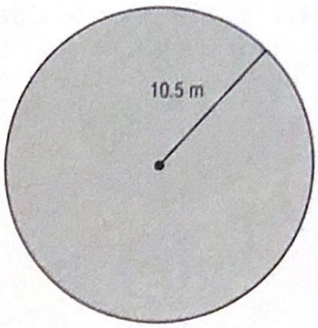
1.



2.



3.



Find the indicated measure. Round to the nearest tenth.

4. The area of a circle is 132.7 square centimeters. Find the diameter.

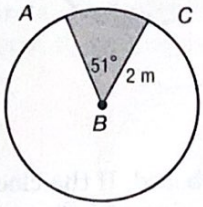
5. Find the diameter of a circle with an area of 1134.1 square millimeters.

6. The area of a circle is 706.9 square inches. Find the radius.

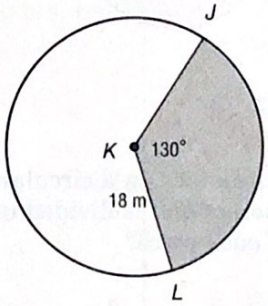
7. Find the radius of a circle with an area of 2827.4 square feet.

Find the area of each shaded sector. Round to the nearest tenth.

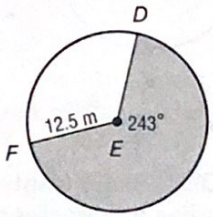
8.



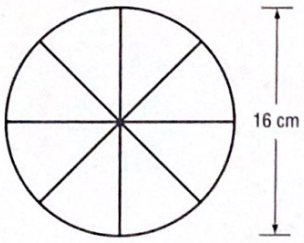
9.



10.



11. GAMES Jason wants to make a spinner for a new board game he invented. The spinner is a circle divided into 8 congruent pieces, what is the area of each piece to the nearest tenth?



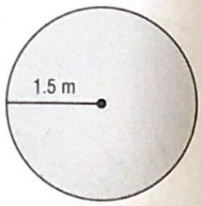
NAME _____ DATE _____ PERIOD _____

11-3 Practice

Areas of Circles and Sectors

Find the area of each circle. Round to the nearest tenth.

1.



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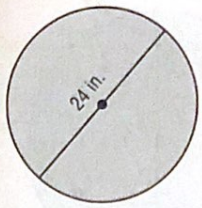
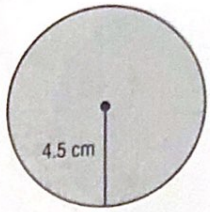


3.



Find the indicated measure. Round to the nearest tenth.

4. The area of a circle is 3.14 square centimeters. Find the diameter.

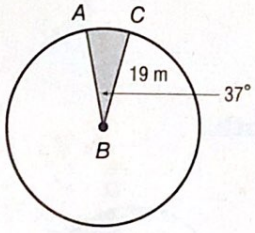
5. Find the diameter of a circle with an area of 855.3 square millimeters.

6. The area of a circle is 201.1 square inches. Find the radius.

7. Find the radius of a circle with an area of 2290.2 square feet.

Find the area of each shaded sector. Round to the nearest tenth.

8.



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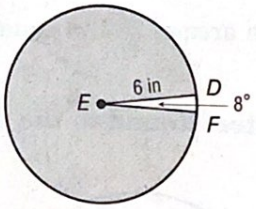
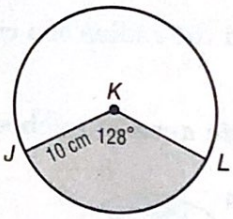


10.



11. CLOCK Sadie wants to draw a clock face on a circular piece of cardboard. If the clock face has a diameter of 20 centimeters and is divided into congruent pieces so that each sector is 30°, what is the area of each piece?

NAME _____ DATE _____ PERIOD _____

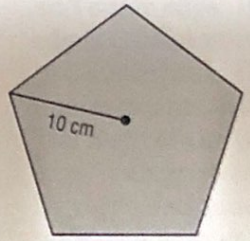
11-4 Skills Practice

Areas of Regular Polygons and Composite Figures

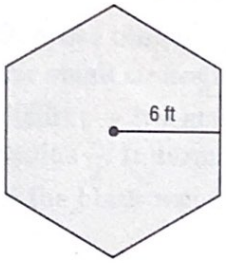
Find the area of each regular polygon. Round to the nearest tenth.

1.

2.



3.



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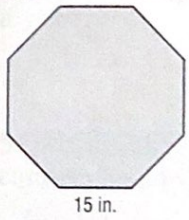
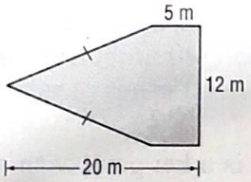


Find the area of each figure. Round to the nearest tenth if necessary.

5.



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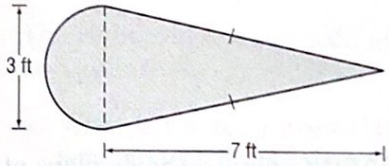

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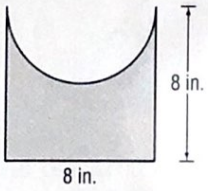

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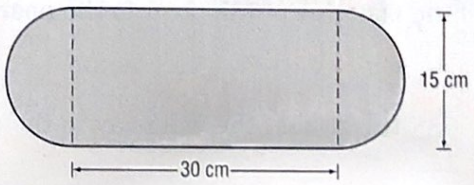
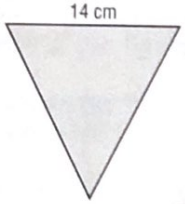


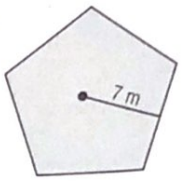
NAME _____ DATE _____ PER_____

11-4 Practice

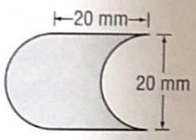
Areas of Regular Polygons and Composite Figures

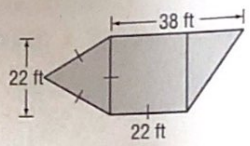
Find the area of each regular polygon. Round to the nearest tenth.

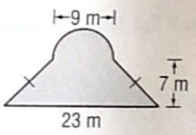
1. 

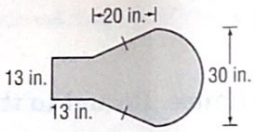
2. 

Find the area of each figure. Round to the nearest tenth if necessary.

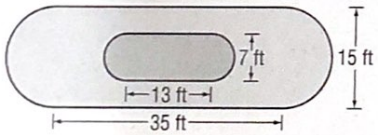
3. 

4. 

5. 

6. 

7. **LANDSCAPING** One of the displays at a botanical garden is a koi pond with a walkway around it. The figure shows the dimensions of the pond and the walkway.



a. Find the area of the pond to the nearest tenth.

b. Find the area of the walkway to the nearest tenth.

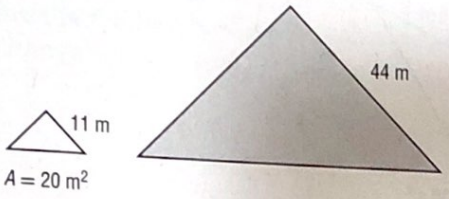
NAME _____ DATE _____ PERIOD _____

11-5 Skills Practice

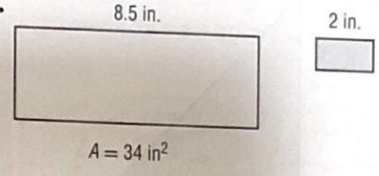
Areas of Similar Figures

For each pair of similar figures, find the area of the shaded figure.

1.

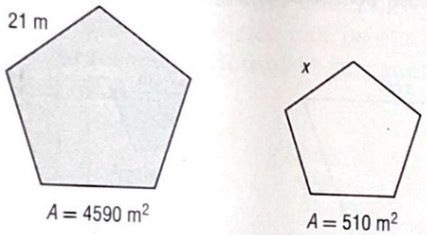


2.

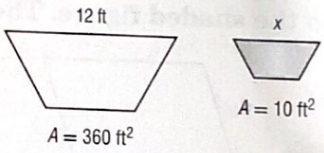


For each pair of similar figures, use the given areas to find the scale factor from the unshaded to the shaded figure. Then find x.

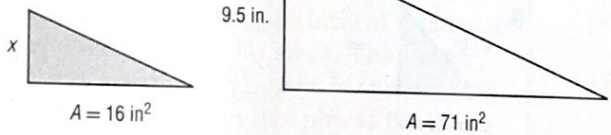
3.



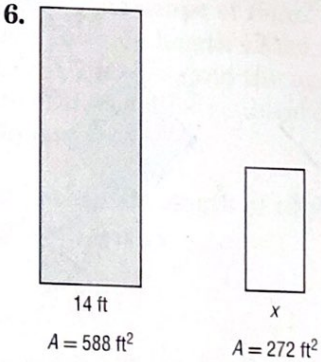
4.



5.



6.



7. SCIENCE PROJECT Matt has two posters for his science project. Each poster is a rectangle. The length of the larger poster is 11 inches. The length of the smaller poster is 6 inches. What is the area of the smaller poster if the larger poster is 93.5 square inches?

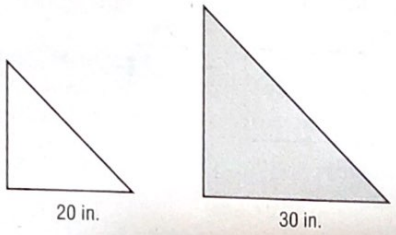
NAME _____ DATE _____ PERIOD _____

11-5 Practice

Areas of Similar Figures

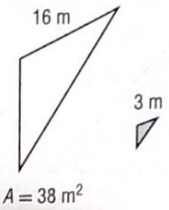
For each pair of similar figures, find the area of the shaded figure.

1.



$A = 200$ in^2

2.

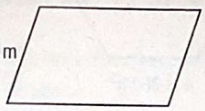


$A = 38$ m^2

For each pair of similar figures, use the given areas to find the scale factor from the unshaded to the shaded figure. Then find x.

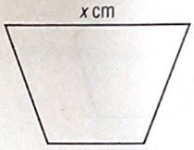
3.

$A = 50$ m^2



$A = 72$ m^2

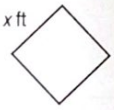
4.



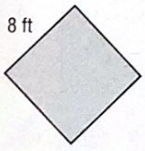
$A = 70$ cm^2

$A = 30$ cm^2

5.

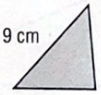


$A = 16$ ft^2



$A = 64$ ft^2

6.



$A = 39$ cm^2

$A = 13$ cm^2

7. ARCHERY A target consists of two concentric similar octagons. The outside octagon has a side length of 2 feet and an area of 19.28 square feet. If the inside octagon has a side length of 1.5 feet, what is the area of the inside octagon?