Name _____ Date _____

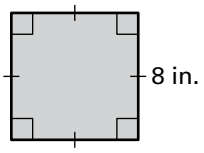
LESSON 1.7

Practice A

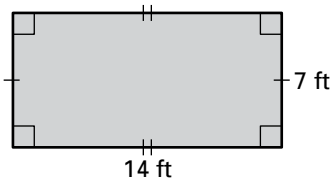
For use with pages 49–56

Find the perimeter and area of the figure.

1.



2.



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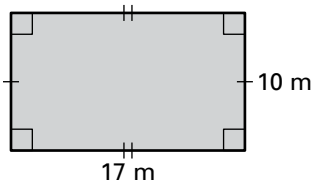

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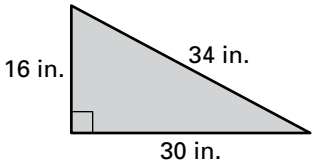

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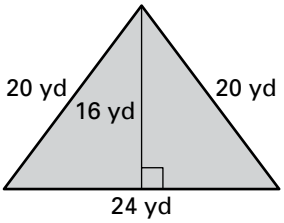
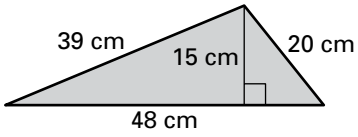
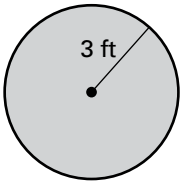


6.



Find the circumference and area of the circle. Round to the nearest tenth.

7.



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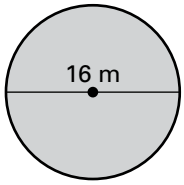
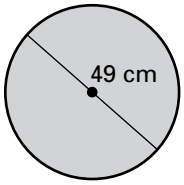


9.

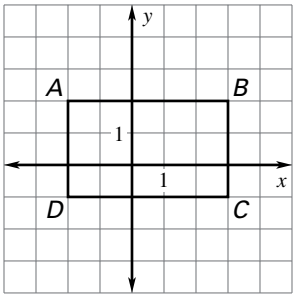


10. A triangle has a base of 4 yards and a height of 12 yards. Sketch the triangle and find its area.

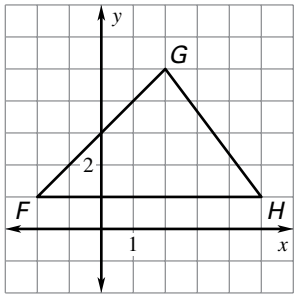
11. A circle has a radius of 11 inches. Sketch the circle and find its area. Round your answer to the nearest tenth.

Find the perimeter of the figure. Round decimal answers to the nearest tenth of a unit.

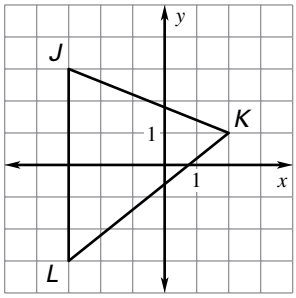
12.



13.



14.



Copy and complete the statement.

15. 54 cm^2 = __?__ m^2

16. 78 $in.^2$ = __?__ ft^2

17. 23 yd^2 = __?__ ft^2

18. 96 mm^2 = __?__ cm^2

19. 3000 m^2 = __?__ km^2

20. 15 ft^2 = __?__ $in.^2$

Name _____ Date _____

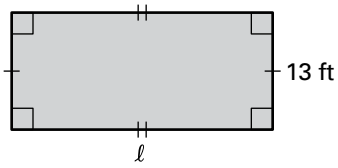
LESSON 1.7

Practice A *continued*

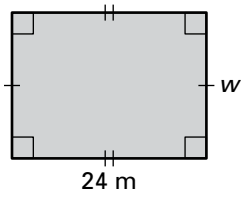
For use with pages 49–56

Use the information about the figure to find the indicated measure.

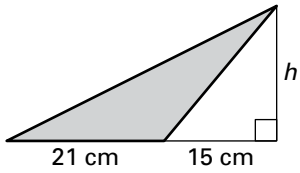
21. Perimeter = 84 ft
Find the length ℓ.



22. Area = 432 m^2
Find the width w.



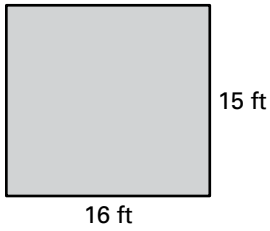
23. Area = 189 cm^2
Find the height h.



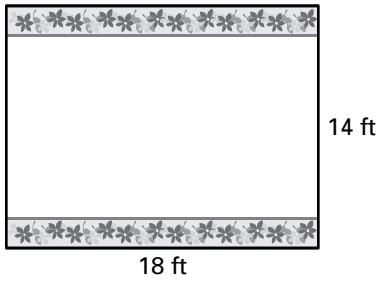
24. The area of a rectangle is 551 square inches, and its width is 19 inches. Find the length of the rectangle.

25. The area of a triangle is 204 square meters, and its base is 24 meters. Find the height of the triangle.

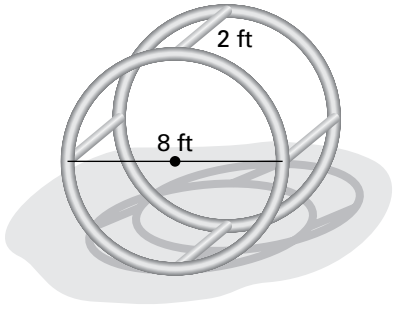
26. **Carpet Shampoo** You are shampooing your bedroom carpet. Your bedroom is 16 feet long by 15 feet wide. One gallon of carpet shampoo covers 80 square feet of carpet. How many gallons of carpet shampoo do you need?



27. **Wall** You are going to paint a rectangular wall. You are then going to put decorative trim at the top and bottom of the wall as shown. The wall is 18 feet long by 14 feet high. How much area do you need to paint? How many inches of trim do you need?



28. **Gymnastics Wheel** A gymnastics wheel, sometimes called a German wheel, is used for acrobatic performances. The wheel is made of two congruent circular metal frames separated by 4 bars that are each 2 feet long. The frame has a diameter of 8 feet. Calculate the number of feet of metal frame (including the bars) needed to make the gymnastics wheel.



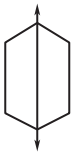
Lesson 1.6, continued

Review for Mastery

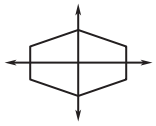
1. not a polygon **2.** polygon; convex **3.** not a polygon **4.** polygon; concave **5.** quadrilateral; regular, equilateral, equiangular **6.** 16 mm

Challenge Practice

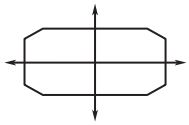
1. *Sample answer:*



2. *Sample answer:*

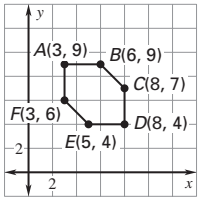


3. *Sample answer:*



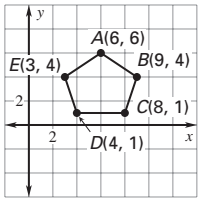
4. *Sample answer:*

5.



Hexagon; not equilateral because $AB = 3$, $BC = 2\sqrt{2}$, $CD = 3$, $DE = 3$, $EF = 2\sqrt{2}$, $FA = 3$.

6.



Pentagon; not equilateral because $AB = \sqrt{13}$, $BC = \sqrt{10}$, $CD = 4$, $DE = \sqrt{10}$, $EA = \sqrt{13}$.

7. $x = 12$, $y = 8$ **8.** $x = 6$, $y = 7$

9. $x = 20$, $y = 16$

10. The midpoint of the diagonal between (b, c) and $(a, 0)$ is $\left(\frac{a+b}{2}, \frac{c}{2}\right)$. The midpoint of the diagonal between $(a + b, c)$ and $(0, 0)$ is $\left(\frac{a+b}{2}, \frac{c}{2}\right)$. So, the diagonals intersect at their midpoints.

Lesson 1.7

Practice Level A

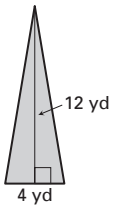
1. $P = 32$ in., $A = 64$ in.^{2} **2.** $P = 42$ ft, $A = 98$ ft^2 **3.** $P = 54$ m, $A = 170$ m^2

4. $P = 80$ in., $A = 240$ in.^{2} **5.** $P = 64$ yd, $A = 192$ yd^2 **6.** $P = 107$ cm, $A = 360$ cm^2

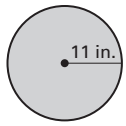
7. $C = 18.8$ ft, $A = 28.3$ ft^2 **8.** $C = 50.3$ m, $A = 201.1$ m^2

9. $C = 153.9$ cm, $A = 1885.7$ cm^2

10. 24 yd^2



11. 380.1 in.^{2}



12. 16 units **13.** 17.7 units **14.** 17.8 units

15. 0.0054 **16.** 0.54 **17.** 207 **18.** 0.96

19. 0.003 **20.** 2160 **21.** 29 ft **22.** 18 m

23. 18 cm **24.** 29 in. **25.** 17 m **26.** 3 gal

27. 252 ft^2; 432 in. **28.** 58.27 ft

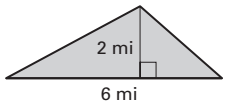
Practice Level B

1. 46 ft; 126 ft^2 **2.** 30 in.; 30 in.^{2}

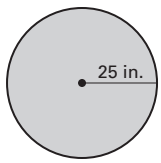
3. 38 m; $90\frac{1}{4}$ m^2 **4.** 201.0 cm; 3215.4 cm^2

5. 94.2 yd; 706.5 yd^2 **6.** 18.2 km; 26.4 km^2

7. *Sample answer:* 6 mi^2



8. 1962.5 in.^{2}



9. 13.4 units **10.** 13.6 units **11.** 18.0 units

12. 6 in. **13.** 16.6 m **14.** 0.0072 **15.** 0.000022

16. 0.125 **17.** 126 **18.** 1300 **19.** 1,500,000

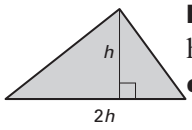
20. 65 **21.** 1728 **22.** 1 **23.** 24 in. **24.** 12 m

25. $43\frac{3}{4}$ m **26.** length = 9.6 cm, width = 4.8 cm

27. height = 52 yd, base = 13 yd

28. $\frac{1}{9} \approx 11\%$ **29.** 2916 yd^2; 648 ft **30.** 2

31. a.



b. base = 7 ft, height = 3.5 ft

c. 126 in.^{2}; 0.875 ft^2

Practice Level C

1. $P = 11$ m, $A = 7.6$ m^2 **2.** $P = 40.8$ cm, $A = 93.2$ cm^2 **3.** $P = 200$ in., $A = 1320$ in.^{2}

4. $C = 33.3$ cm, $A = 88.2$ m^2

5. $C = 55.9$ ft, $A = 248.8$ ft^2