

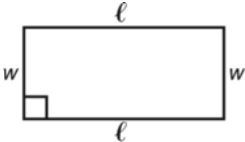
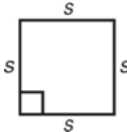
LESSON

1-5

Reteach

Using Formulas in Geometry

The **perimeter** of a figure is the sum of the lengths of the sides.
 The **area** is the number of square units enclosed by the figure.

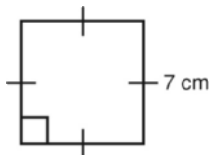
Figure	Rectangle	Square
Model		
Perimeter	$P = 2l + 2w$ or $2(l + w)$	$P = 4s$
Area	$A = lw$	$A = s^2$

Find the perimeter and area of each figure.

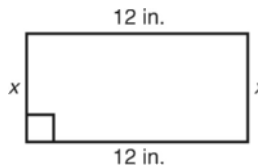
1. rectangle with $l = 4$ ft, $w = 1$ ft

2. square with $s = 8$ mm

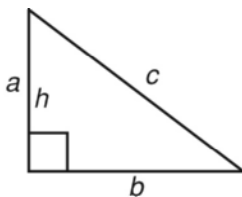
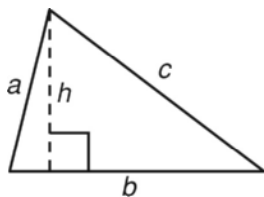
3.



4.



The perimeter of a triangle is the sum of its side lengths.
 The base and height are used to find the area.



Perimeter

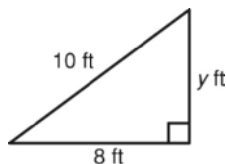
$$P = a + b + c$$

Area

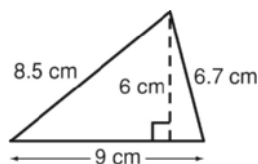
$$A = \frac{1}{2}bh \text{ or } \frac{bh}{2}$$

Find the perimeter and area of each triangle.

5.



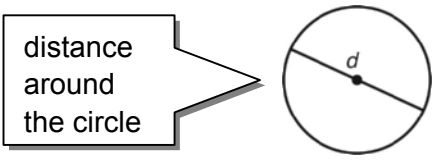
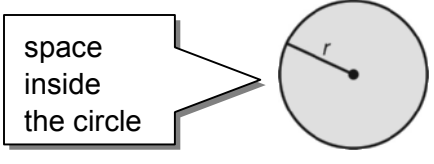
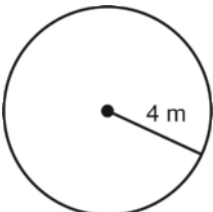
6.



LESSON
1-5

Reteach

Using Formulas in Geometry *continued*

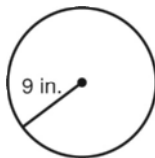
Circles		
	Circumference	Area
Models		
Words	pi times the diameter or 2 times pi times the radius	pi times the square of the radius
Formulas	$C = \pi d$ or $C = 2\pi r$	$A = \pi r^2$
		$C = 2\pi r$ $C = 2\pi(4)$ $C = 8\pi$ $C \approx 25.1 \text{ m}$
		$A = \pi r^2$ $A = \pi(4)^2$ $A = 16\pi$ $A \approx 50.3 \text{ m}^2$

Find the circumference and area of each circle. Use the π key on your calculator. Round to the nearest tenth.

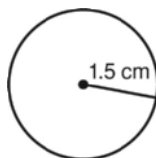
7. circle with a radius of 11 inches

8. circle with a diameter of 15 millimeters

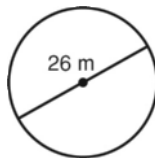
9.



10.



11.



12.



12. 12.5 mm 13. 7.5 ft
14. 42 ft²

Practice C

1. 4 units 2. 2 units
3. Area is measured in square units, and perimeter is measured in linear units.
4. $A = 121 \text{ ft}^2$; $\ell = 11 \text{ ft}$; $w = 11 \text{ ft}$
5. For a given perimeter, a rectangle with sides of equal length (a square) encloses the maximum area.
6. about 154 ft² 7. about 33 ft²
8. If a rectangle and a circle have the same perimeter, then the circle has the greater area.
9. 197.5 in² 10. $a = 8$

Reteach

1. 10 ft; 4 ft²
2. 32 mm; 64 mm²
3. 28 cm; 49 cm²
4. $(24 + 2x) \text{ in.}$; $12x \text{ in}^2$
5. $(18 + y) \text{ ft}$; $4y \text{ ft}^2$
6. 24.2 cm; 27 cm²
7. 69.1 in.; 380.1 in²
8. 47.1 mm; 176.7 mm²
9. 56.5 in.; 254.5 in²
10. 9.4 cm; 7.1 cm²
11. 81.7 m; 530.9 m²
12. 103.7 mm; 855.3 mm²

Challenge

1. $P = 11 \text{ cm}$; $A = 8.25 \text{ cm}^2$
2. The perimeter will double. The area will be 4 times greater.
3. The area will be 9 times greater. k^2A
4. 249.6 m² 5. 11.2 cm²
6. 1.7 in² 7. 45.1 mm²

Problem Solving

1. 320 yd 2. 6000 yd²
3. about 401.92 yd² 4. 3000 yd²
5. A 6. G

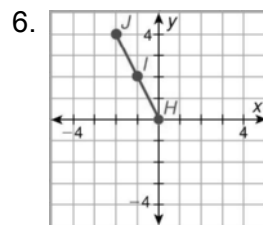
Reading Strategies

1. Answers will vary. Students should indicate that the perimeter of the square is the sum of the lengths of the sides.
2. Answers will vary. Students should point out that the perimeter of any object is the sum of the lengths of all the sides.
3. Area = length \times width or Area = length of one side \times 4
4. Area = length \times width; Area = 2×2 ; Area = 4 square units

LESSON 1-6

Practice A

1. x-axis; y-axis 2. coordinates
3. $\left(1\frac{1}{2}, 0\right)$ 4. $(0, -1)$
5. $\left(1\frac{1}{2}, -1\right)$



7. $(-2, 4)$ 8. $(-1, -3)$
9. 3 miles 10. 4 miles
11. 1 mile

Practice B

1. $(3, -3)$ 2. $\left(\frac{x}{2}, \frac{y-3}{2}\right)$
3. $(-4, -2)$ 4. $\sqrt{26}$ units
5. $\sqrt{26}$ units 6. $4\sqrt{2}$ units
7. \overline{AB} and \overline{BC} 8. 6.4 units
9. 11.4 units 10. 13.4 ft
11. 101.8 in.

Practice C

1.
$$\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$
since $(x_1^2 - 2x_1x_2 + x_2^2) + (y_1^2 - 2y_1y_2 + y_2^2)$
$$= (x_2^2 - 2x_1x_2 + x_1^2) + (y_2^2 - 2y_1y_2 + y_1^2)$$