

**1.7****Find Perimeter, Circumference,  
and Area****Goal** • Find dimensions of polygons.

Perimeter-The distance around the figure.

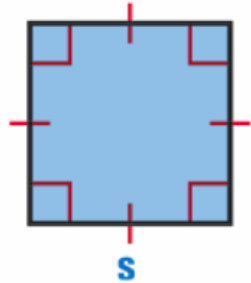
Area-The amount of surface a figure covers\_  
units squared.

Circumference-Distance around a circle\_

**KEY CONCEPT****For Your Notebook****Formulas for Perimeter  $P$ , Area  $A$ , and Circumference  $C$** **Square**side length  $s$ 

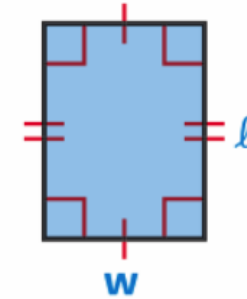
$$P = 4s$$

$$A = s^2$$

**Rectangle**length  $\ell$  and width  $w$ 

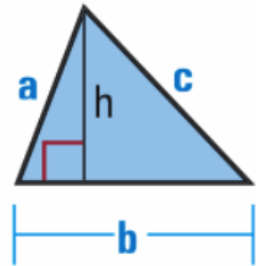
$$P = 2\ell + 2w$$

$$A = \ell w$$

**Triangle**side lengths  $a$ ,  $b$ ,  
and  $c$ , base  $b$ ,  
and height  $h$ 

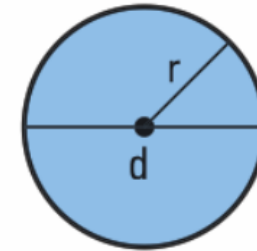
$$P = a + b + c$$

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

**Circle**diameter  $d$   
and radius  $r$ 

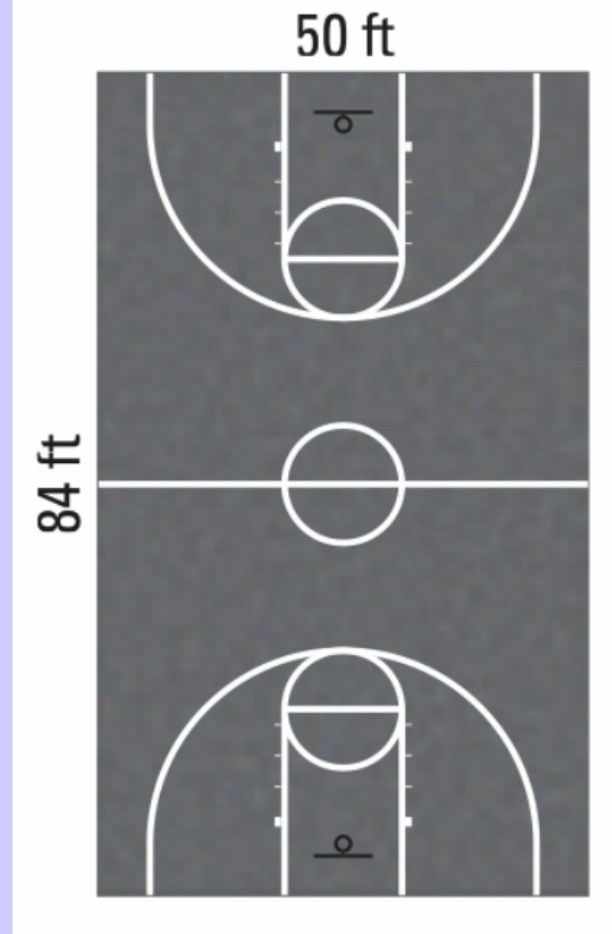
$$C = \pi d = 2\pi r$$

$$A = \pi r^2$$

**Pi ( $\pi$ ) is the ratio of a circle's  
circumference to its diameter.**

**EXAMPLE 1** Find the perimeter and area of a rectangle

**BASKETBALL** Find the perimeter and area of the rectangular basketball court shown.



**EXAMPLE 2** Find the circumference and area of a circle

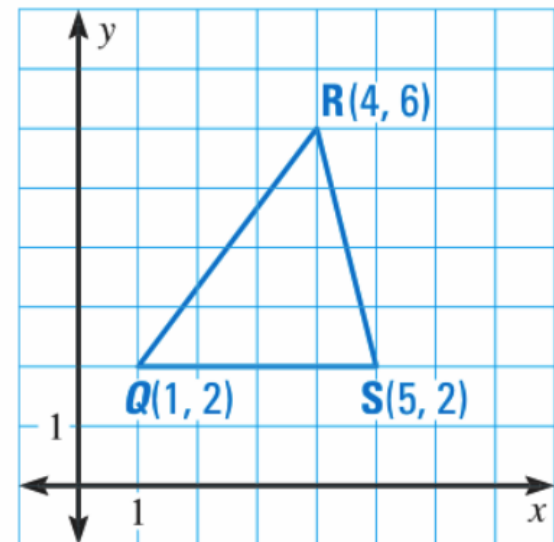
**TEAM PATCH** You are ordering circular cloth patches for your soccer team's uniforms. Find the approximate circumference and area of the patch shown.



**EXAMPLE 3** Standardized Test Practice

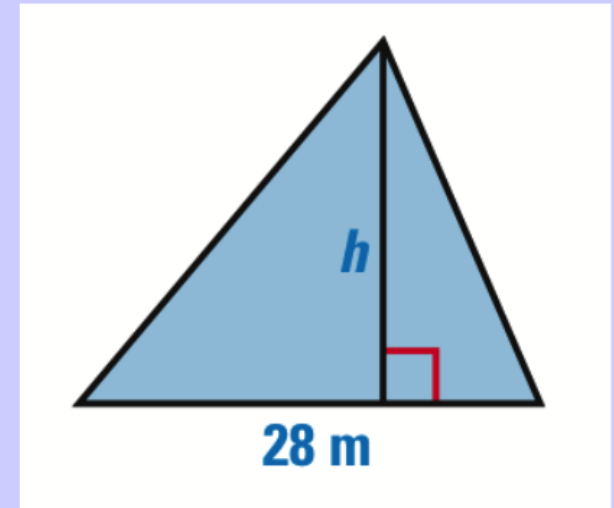
Triangle  $QRS$  has vertices  $Q(1, 2)$ ,  $R(4, 6)$ , and  $S(5, 2)$ . What is the approximate perimeter of triangle  $QRS$ ?

- Ⓐ 8 units      Ⓑ 8.3 units      Ⓒ 13.1 units      Ⓓ 25.4 units



**EXAMPLE 5 Find unknown length**

The base of a triangle is 28 meters. Its area is 308 square meters. Find the height of the triangle.



**Assignment:**

p. 52 (1-32 all) & p. 56 (1-7 all)