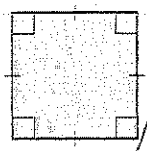
H. Geometry Sec. 1.7 Name Key

Find the perimeter and area of the figure. Round decimal answers to the nearest tenth. keep fraction answers, Label answers with proper units,

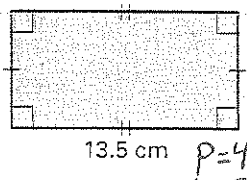
1.



$P = 11$ m

$A = \frac{121}{16}$ m^2

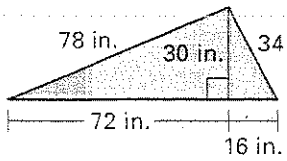
2.



$P = 40.8$ cm

$A = 93.2$ cm^2

3.

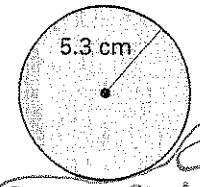


$P = 200$ in

$A = 1320$ in^2

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

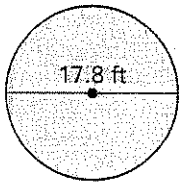
4.



$C = 10.6\pi$ cm

28.09π or $A = 88.2$ cm^2

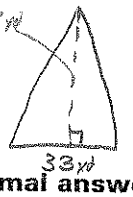
5.



$C = 17.8\pi$ ft

$A = 79.21\pi$ ft^2 or 248.845 ft^2

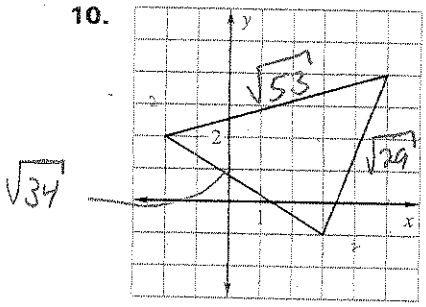
7. A triangle has a base of 33 yards and a height of 56 yards. Sketch the triangle and find its area.



$A = 924$ yd^2

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

10.



$P = 18.5$

Copy and complete the statement.

12. 47 cm^2 = ? m^2 .0047

13. 63 in.^{2} = ? ft^2 .4375

15. 38 mm^2 = ? cm^2 .38

16. 2000 m^2 = ? km^2 .002

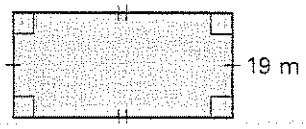
18. 51.6 ft^2 = ? in.^{2} 7430.4

19. 92.4 km^2 = ? m^2 92,400,000

21. A triangle has a base of 71 inches and a height of 60 inches. Find its area in square yards. Round your answer to the nearest tenth.

1.6 yd^2

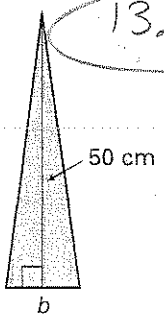
22. Perimeter = 117 m
Find the length ℓ.



39.5 m

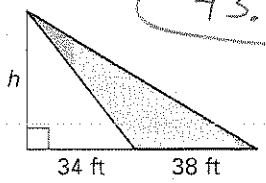
23. Area = 345 cm^2
Find the base b.

13.8 cm



24. Area = 826.5 ft^2
Find the height h.

43.5 ft



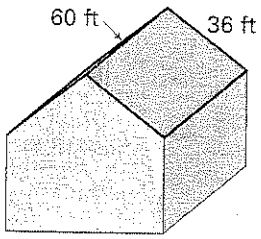
26. The area of a rectangle is 144 square meters. The length of the rectangle is three times its width. Find the length and width of the rectangle.

$\ell = 12\sqrt{3}$ m
$w = 4\sqrt{3}$ m

27. The area of a triangle is 578 square centimeters. Its base is four times the length of its height. Find the height and base of the triangle.

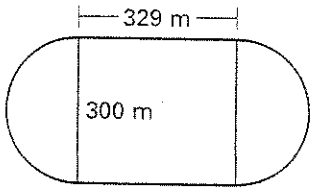
$b = 68$ cm
$h = 17$ cm

28. **Shingles** You are buying shingles for a roof. Each bundle of shingles will cover 33 square feet. The roof consists of two rectangular parts, and each is 60 feet by 36 feet. How many bundles of shingles do you need? 131 bundles



29. **Irrigation** A new irrigation system has been installed. Each irrigation arm covers a circular region with a radius of 45 feet. How many square feet will 8 irrigation arms cover? 50893.8 ft^2

30. **Track** The design of a race track consists of a rectangle and two half-circles, as shown in the figure.



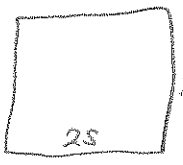
a. What is the distance of one lap around the track? 1600 m

b. A charity walk is 10 kilometers long. How many times must participants lap the track to finish the walk? 6.25

c. Suppose a participant is walking at an average speed of 4 kilometers per hour. How long will it take the participant to finish the 10-kilometer walk? 2.5 hours

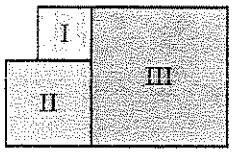
1. The sides of a square are doubled. How does the perimeter and area of the new square compare with the perimeter and area of the original square? *Justify* your answer. - Perimeter doubles
- Area quadruples

$P = 4s$
$A = s^2$



$P = 4(2s) = 8s$
$A = (2s)^2$
$A = 4s^2$

3. The figure at the right shows three squares. The area of square I is 25 square inches and the area of square II is 64 square inches. What is the perimeter and area of square III?



$P = 52''$
$A = 169$ in^2