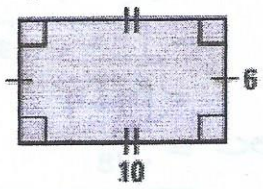
GEOMETRY
Section 1.7: Introduction to Perimeter, Circumference, and Area

Name KEY
Date _____ Period _____

Find the area and the perimeter (or circumference) and area of the figure. If necessary, leave your answer in π.

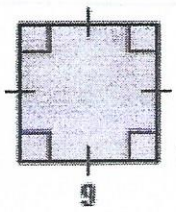
1.



AREA = 10(6)
AREA = 60 UNITS²

PERIMETER = 10+6+10+6
PERIMETER = 32 UNITS

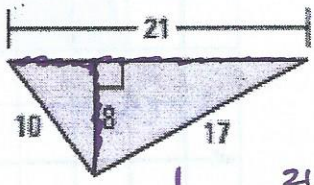
2.



AREA = 9²
AREA = 81 UNITS²

PERIMETER = 9(4)
PERIMETER = 36 UNITS

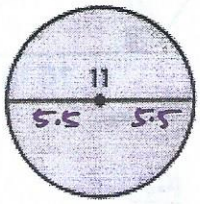
3.



AREA = $\frac{21(8)}{2}$
AREA = 84 UNITS²

PERIMETER = 21+10+17
PERIMETER = 48 UNITS

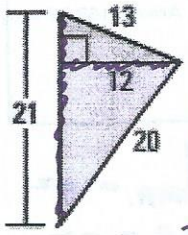
4.



AREA = πr^2
AREA = $\pi(5.5)^2$
AREA = 30.25π UNITS²

PERIMETER / CIRCUMFERENCE = $2\pi r$
= $2\pi(5.5)$
CIRCUMFERENCE 11π UNITS

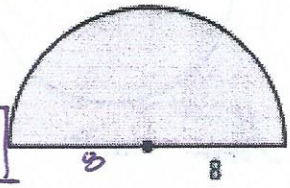
5.



AREA = $\frac{21(12)}{2}$
AREA = 126 UNITS²

PERIMETER = 21+13+20
PERIMETER = 54 UNITS

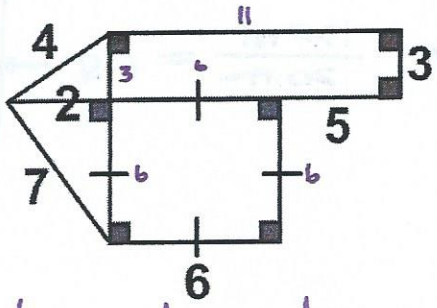
6.



AREA = $\frac{\pi(8)^2}{2}$
AREA = 32π UNITS²

PERIMETER = $\frac{2\pi(8)}{2}$ + 16
PERIMETER = 8π+16 UNITS

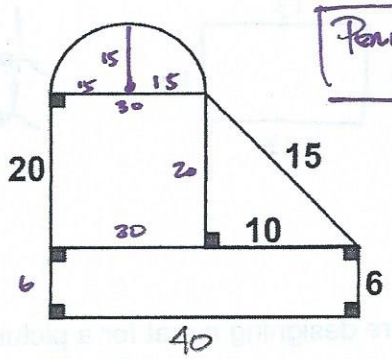
7.



TOTAL AREA = AREA △ + AREA □ + AREA □
= $\frac{9(2)}{2}$ + 6² + 11(3)
= 9 + 36 + 33
TOTAL AREA = 78 UNITS²

PERIMETER = 7+6+6+5+3+11+4
PERIMETER = 42 UNITS

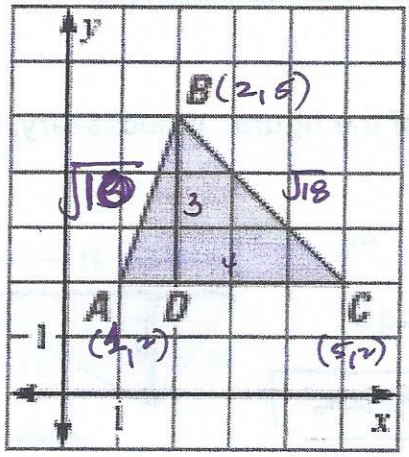
8.



TOTAL AREA = AREA □ + AREA □ + AREA △ + AREA ◗
= 20(30) + 40(6) + $\frac{10(20)}{2}$ + $\frac{\pi(15)^2}{2}$
= 600 + 240 + 100 + 112.5π
TOTAL AREA = 940 + 112.5π UNITS²

PERIMETER = 40+6+15+20+6+2π(15)
PERIMETER = 87 + 30π UNITS

9. Find the perimeter and area of the triangle.



$\text{AREA}_{\Delta} = \frac{4(3)}{2}$

$\text{AREA}_{\Delta} = 6 \text{ UNITS}^2$

$\text{DISTANCE AB} = \sqrt{(2-1)^2 + (5-2)^2}$

$= \sqrt{1^2 + 3^2}$

$= 1 + 9$

$\text{DISTANCE AB} = \sqrt{10}$

$\text{DISTANCE BC} = \sqrt{(5-2)^2 + (2-5)^2}$

$= \sqrt{3^2 + (-3)^2}$

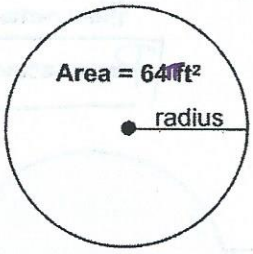
$= \sqrt{9+9}$

$\text{DISTANCE BC} = \sqrt{18}$

$\text{TOTAL DISTANCE} = \sqrt{10} + \sqrt{18} + 4$

Use the given measurements to find the unknown measurement. If necessary, leave your answer in π.

10.



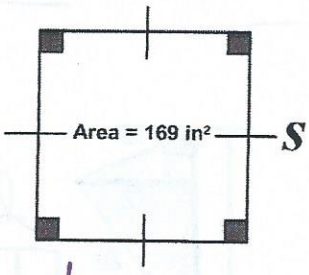
$\text{AREA} = \pi r^2$

$\frac{64\pi}{\pi} = \frac{\pi r^2}{\pi}$

$64 = r^2$

$\sqrt{64} = \sqrt{r^2} \rightarrow$ **8 FT = r**

11.



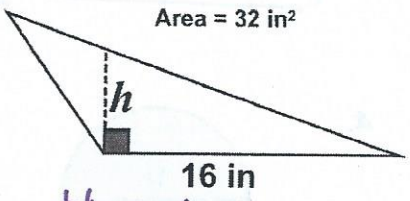
$\text{AREA} = s^2$

$169 = s^2$

$\sqrt{169} = \sqrt{s^2}$

13 IN = s

12.



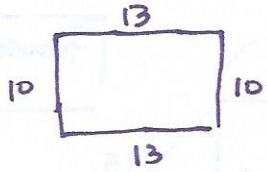
$\text{AREA} = \frac{bh}{2}$

$32 = \frac{16h}{2}$

$64 = 16h$

4 IN = h

11. You are redoing the carpet in your rectangular bedroom. The dimensions of your bedroom is 10 ft by 13 ft. If a roll of carpet covers 20 ft^2, how many rolls of carpet do you need?

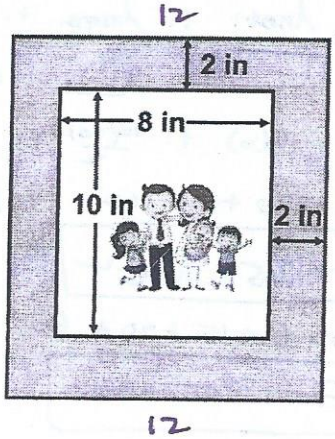


$\text{AREA} = 13(10)$

$\text{AREA} = 130 \text{ FT}^2$

$\frac{130 \text{ FT}^2}{20 \text{ FT}^2} = 6.5 \rightarrow$ **NEED 7 ROLLS OF CARPET**

12. You are designing a mat for a picture. The picture is 8 inches wide and 10 inches tall. The mat is to be 2 inches wide. What is the area of the mat?



$\text{AREA}_{\text{MAT}} = \text{AREA}_{\text{OUTER}} - \text{AREA}_{\text{INNER}}$

$= 14(12) - 10(8)$

$= 168 - 80$

$\text{AREA}_{\text{MAT}} = 88 \text{ IN}^2$