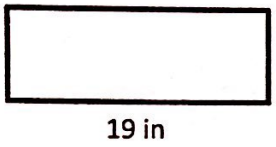
Name: KEY

Area, Perimeter, Circumference Practice: Part 1

Calculators ARE allowed, but <u>you must show all work</u> – even what you type into the calculator! Don't forget labels!!!

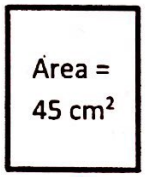
1) Find the area AND perimeter.



$A = l \cdot w$
$A = 19 \cdot 6$
$A = 114 \text{ in}^2$

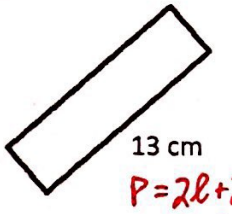
$P = 2(19) + 2(6)$
$P = 38 + 12$
$P = 50 \text{ in}$

2) Find the length.



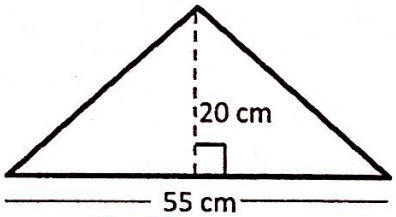
$A = l \cdot w$
$\frac{45}{7.5} = \frac{7.5 \cdot w}{7.5}$
$6 \text{ cm} = w$

3) The perimeter is 36 ft. Find the width.



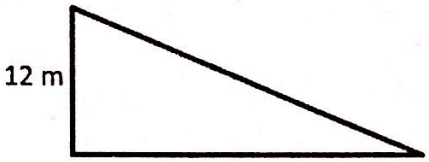
$P = 2l + 2w$
$36 = 2(13) + 2w$
$36 = 26 + 2w$
$-26 \quad -26$
$10 = 2w$
$w = 5 \text{ ft}$

4) Find the area.



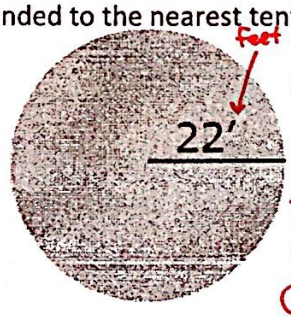
$A = \frac{bh}{2}$
$A = \frac{55 \cdot 20}{2}$
$A = 550 \text{ cm}^2$

5) The area is 96 m². Find the base.



$A = \frac{b \cdot h}{2}$
$96 = \frac{b \cdot 12}{2}$
$\frac{96}{6} = \frac{b \cdot 6}{6}$
$16 \text{ m} = b$

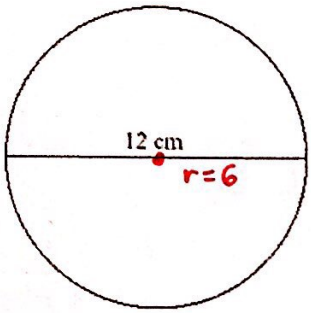
6) Find the area AND circumference. Write your answers as decimals rounded to the nearest tenth.



$A = \pi r^2$
$A = \pi \cdot 22^2$
$A = 484\pi$
$A \approx 1520.5 \text{ ft}^2$

$C = 2\pi r$
$C = 2\pi \cdot 22$
$C = 44\pi$
$C \approx 138.2 \text{ ft}$

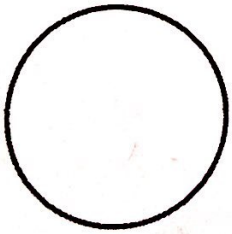
7) Find the area AND circumference. Write <u>exact answers</u>. (Leave pi in the answers.)



$A = \pi \cdot 6^2$
$A = 36\pi \text{ cm}^2$

$C = \pi d$
$C = \pi \cdot 12$
$C = 12\pi \text{ cm}$

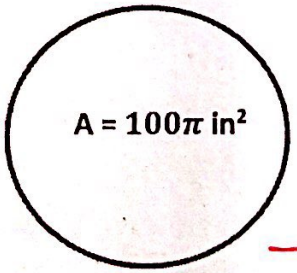
8) The circumference of the circle is 72π mm. Find the radius.



$C = 2\pi r$
$\frac{72\pi}{\pi} = \frac{2\pi r}{\pi}$
$\frac{72}{2} = \frac{2r}{2}$
$36 \text{ mm} = r$

(More on the back!)

9) The area of the circle is 100π in². Find the circumference.



$A = \pi r^2$
$100\pi = \pi r^2$
$100 = r^2$
$10 = r$

$C = 2\pi r$
$C = 2\pi \cdot 10$
$C = 20\pi \text{ in}$ or $C \approx 62.8 \text{ in}$