

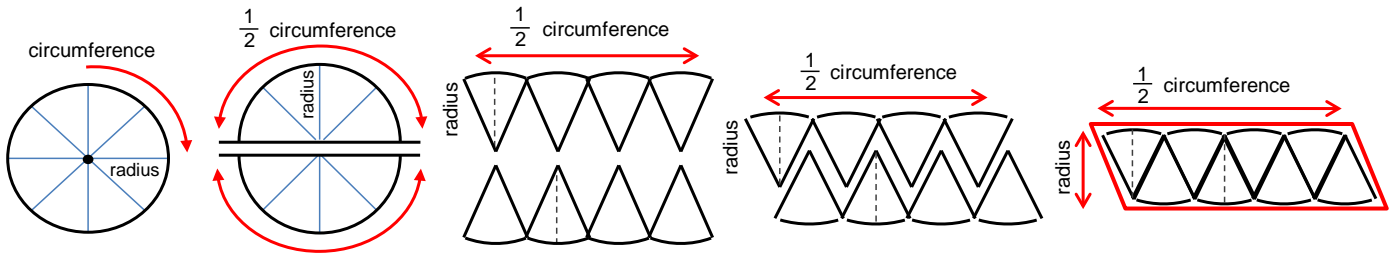
# CIRCLES - AREA

# ANSWERS

Area of a circle =  $\pi \times \text{radius} \times \text{radius}$

$$A = \pi r^2$$

TO FIND THE AREA FORMULA OF A CIRCLE, SEPARATE IT AND THEN PUT IT BACK TOGETHER TO FORM A PARALLELOGRAM.



Now your turn. Use the information above and the vocabulary below to fill in the blanks.

Circumference      diameter       $\pi$  (Pi)      radius      3.14      base      height

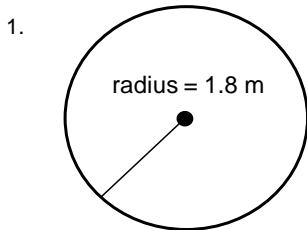
- $\pi$  (pi) = 3.141592653589... or is approximately, 3.14
- Area of a parallelogram = base x height
- Circumference of a circle = 2 x  $\pi$  (Pi) or 3.14 x radius
- Area of a circle =  $\frac{1}{2}$  x Circumference x radius
- Substitute the circumference formula into the area formula for a circle and simplify.

$$\text{Area of a circle} = \frac{1}{2} \times 2 \times \pi \text{ (Pi)} \times \text{radius} \times \text{radius}$$

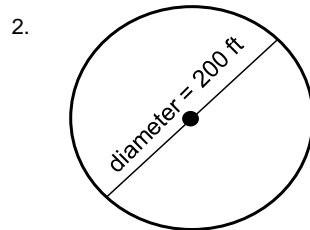
$$\text{Area of a circle} = \pi \text{ (Pi)} \times (\text{radius})^2$$

Find the area of each circle. Use  $\pi = 3.14$

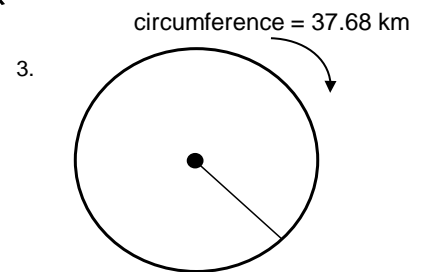
$$A = \pi r^2$$



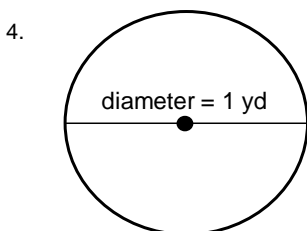
Area = 10.1736 m



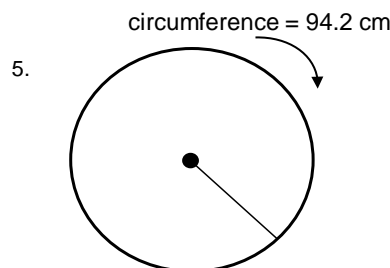
Area = 31,400 ft



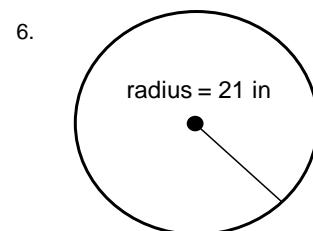
Area = 113.04 km



Area = 0.785 yd



Area = 706.5 cm



Area = 1,384.74 in