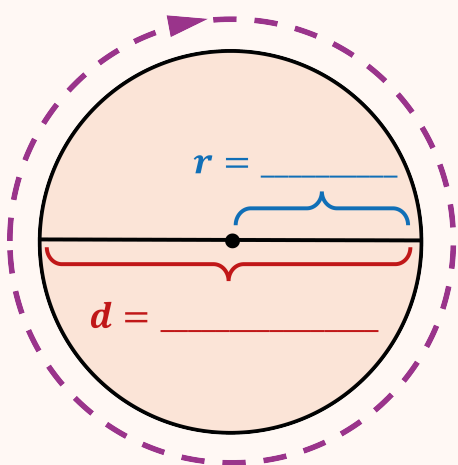


TOPIC: THE CIRCLE

Circumference of a Circle

New

Measuring Circles



$r =$ _____

$d =$ _____

$C =$ _____

The distance around the edge of a circle.

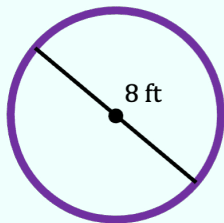
$\frac{C}{d} = \text{---} \approx 3.14159265 \dots$

$C =$
Where $\pi \approx 3.14$ or $\frac{22}{7}$

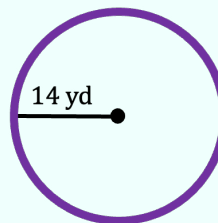
EXAMPLE

Find the circumference of the circle. Use $\pi \approx \frac{22}{7}$.

(A)



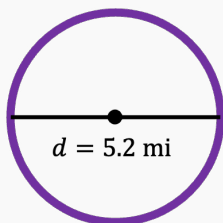
(B)



TOPIC: THE CIRCLE

PRACTICE

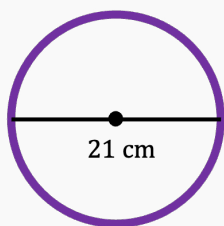
What is the radius of the following circle?



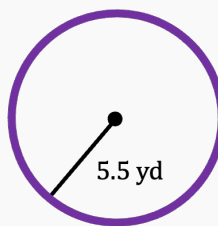
PRACTICE

Find the circumference. Use $\pi = 3.14$.

(A)

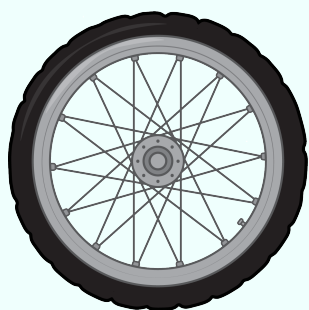


(B)



EXAMPLE

A bicycle wheel has a diameter of 28 inches. Use $\pi = 3.14$.



(A) How far does a point on the edge of the wheel travel in one complete revolution?

(B) Approximately how many revolutions will the wheel make while traveling 176 inches?
Round to the nearest whole revolution.

TOPIC: THE CIRCLE

Area of a Circle

◆ Recall: The circumference of a circle is:

Recall
 $C = 2\pi r$

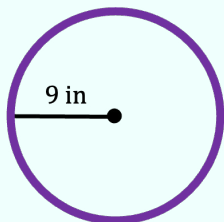
New **Area of a Circle**

The diagram illustrates the derivation of the area of a circle. It starts with a circle divided into sectors. The top half of the sectors is blue and the bottom half is orange. The radius of the circle is labeled r . The circumference of the circle is labeled $2\pi r$. The sectors are then rearranged into a parallelogram-like shape. The base of the shape is labeled $\pi \cdot r$, and the height is labeled r . The area is given by $A =$

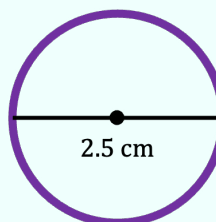
EXAMPLE

Find the area of the circle. Use $\pi = 3.14$ and round to the *tenths* place.

(A)



(B)

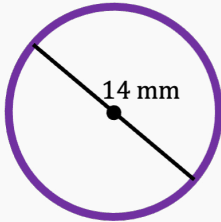


TOPIC: THE CIRCLE

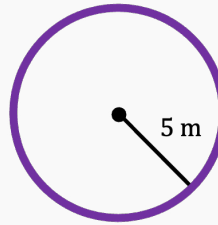
PRACTICE

Find the area of the circle. Use $\pi = \frac{22}{7}$ and simplify.

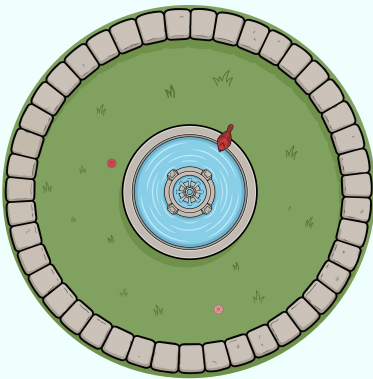
(A)



(B)



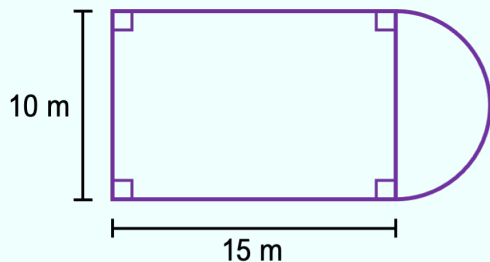
EXAMPLE



A circular patio has a diameter of 18 ft. The owner plans to cover the patio with decorative stone, except for a circular fountain in the center with a radius of 3 ft. How many square feet of the patio will be covered with decorative stone? Use $\pi = 3.14$ and approximate to the nearest *tenth*.

EXAMPLE

Find the area of the figure shown. Leave your answer in terms of π .



Recall

$$A = l \cdot w \quad (\text{Rectangle})$$

$$A = s^2 \quad (\text{Square})$$

$$A = \frac{1}{2}bh \quad (\text{Triangle})$$

$$A = bh \quad (\text{Parallelogram})$$

$$A = \frac{1}{2}(b_1 + b_2)h \quad (\text{Trapezoid})$$