

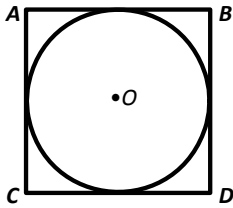
# Circumference and Arc Length

1. Find the missing measures. Round your answers to the nearest tenth.

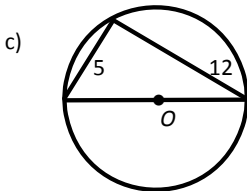
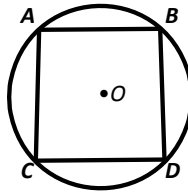
- |                        |                              |
|------------------------|------------------------------|
| a) Radius = 6 feet     | b) Radius =                  |
| Diameter =             | Diameter =                   |
| Circumference =        | Circumference = 138.4 inches |
|                        |                              |
| c) Radius =            | d) Radius = $\frac{x}{3}$    |
| Diameter = 25.8 meters | Diameter =                   |
| Circumference =        | Circumference =              |

2. Find the exact circumference of each circle.

a) Circle  $O$  is inscribed in square  $ABCD$ . Each side of square  $ABCD$  is equal to 10.



b) Square  $ABCD$  is inscribed in Circle  $O$  and the length of each side of the square is equal to 6.



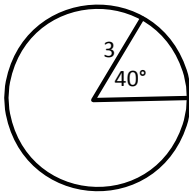
3. If the wheel of a bicycle has a diameter of 2.5 feet, what is the total distance traveled after the wheel makes 10 revolutions?

4. Frank wants to build a fence around a circular pool. If the diameter of the pool is 15 feet, and the fence is to be placed 5 feet from the edge of the pool, how many feet of fencing will be needed?

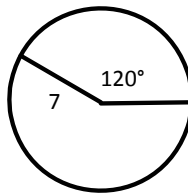
5. If the radius of a circle is doubled, what effect does it have on the circumference?

6. Find the length of each arc.

a)

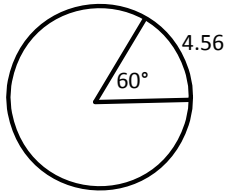


b)

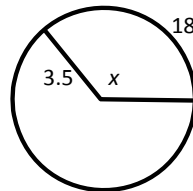


7. Find the value of  $x$ .

a)  $x$  is the circumference



b)  $x$  is the central angle



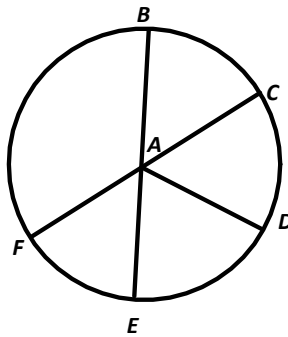
8. Find the value of each if:

$$\angle CAD \cong \angle EAD$$

$FAC$  and  $BAE$  are diameters

$$\angle BAF = 6x$$

$$\angle EAF = 4x - 30$$



a)  $x$

b)  $\angle BAF$

c)  $\angle FAE$

d)  $\angle EAD$

e)  $\angle BAC$

f)  $\angle CAD$

9. Find the values of  $x$  and  $y$ .

