

Notes – Arc Length

What is a radian? _____

What is the circumference of a circle (in terms of π) with a radius of 8 in? _____

Using the circle described above, find the arc length – the length of the arc formed by the x -axis and the terminal side of the angle – created by the given central angle. *First* find the percentage of the circle we are referring to. Round answers to the nearest hundredth.

1. $\frac{\pi}{3}$

2. $\frac{3\pi}{4}$

3. 98°

4. 65°

Notes – Area of a Sector

What is a sector? _____

What is the area of a circle (in terms of π) with a diameter of 9 in? _____

Using the circle described above, find the area of the sector created by the given central angle. *First* find the percentage of the circle we are referring to. Round answers to the nearest hundredth.

1. $\frac{\pi}{6}$

2. $\frac{7\pi}{4}$

3. 103°

4. 38°

Day 16 Homework

Given the radian measure of a central angle, find the length of its intercepted arc in a circle of radius 10 cm. Round answers to the nearest hundredth.

1. $\frac{\pi}{4}$

2. $\frac{2\pi}{3}$

3. $\frac{5\pi}{6}$

4. $\frac{2\pi}{5}$

Given the measurement of a central angle, find the length of its intercepted arc in a circle of diameter 30 in. Round answers to the nearest hundredth.

5. 30°

6. 5°

Given the measurement of a central angle and a radius or diameter, find the area of each sector. Round answers to the nearest hundredth.

7. $x = \frac{5\pi}{12}$ and $d = 20$ ft

8. $\theta = 45^\circ$ and $d = 19.5$ m

9. $x = \frac{5\pi}{3}$ and $r = 1.36$ m

10. $\theta = 54^\circ$ and $r = 6$ in.