

Geometry - Arc Length and Sector Area - Test

Common Core G-C.B.5 · maths-pdf.fr/en/

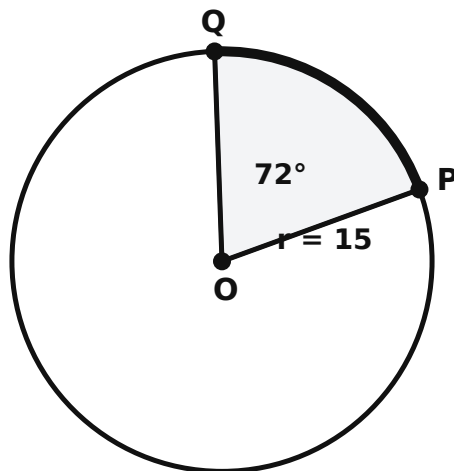
Name: _____ Class: _____ Date: ____/____/____

This 45-minute test checks arc length, sector area and radian measure. It has 9 questions worth 20 points in total. Show every step of the work, label diagrams, and include units where they apply. Calculators are allowed unless the teacher says otherwise.

About this test

- Grade: Geometry
- Chapter: Arc Length and Sector Area
- Standards: G-C.B.5
- Time: 45 minutes
- Total: 20 points

Question 1 - Arc length [2 pts]



Sector.

Find the arc length of the sector exactly and to the nearest hundredth.

Question 2 - Sector area [2 pts]

Find the area of a sector with radius 12 and central angle 150° . Leave the answer in terms of

pi.

Question 3 - Radians [3 pts]

- a. Convert 225° to radians. (1 point)
- b. Convert $\frac{7\pi}{6}$ radians to degrees. (1 point)
- c. Find the arc length when $r = 9$ and $\theta = \frac{2\pi}{3}$ radians. (1 point)

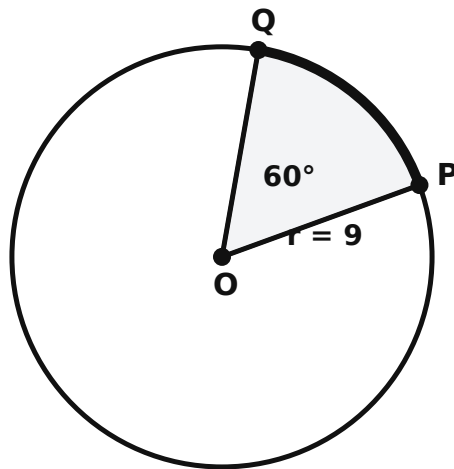
Question 4 - Find the radius [2 pts]

A sector with central angle 45° has area 8π . Find the radius of the circle.

Question 5 - Central angle [2 pts]

An arc of length 5π is on a circle of radius 12. Find the central angle in degrees and in radians.

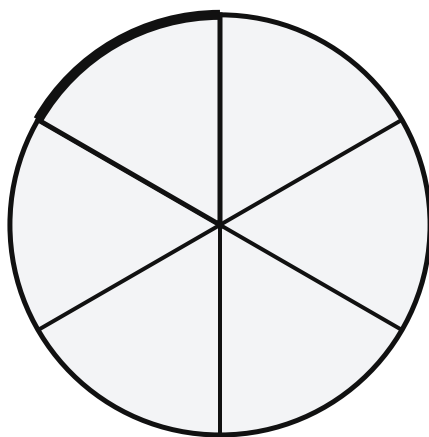
Question 6 - Sector perimeter [2 pts]



Sector.

Find the perimeter of the sector to the nearest tenth.

Question 7 - Pizza slices [2 pts]



A pizza cut into 6 equal slices.

A pizza with diameter 18 inches is cut into 6 equal slices. Find the area of one slice to the nearest tenth.

Question 8 - Wheel turn [2 pts]

A bicycle wheel has radius 14 inches. Through what angle in radians must it turn to roll forward 70 inches? How many full turns is that, to the nearest tenth?

Question 9 - Lawn [3 pts]

A garden bed is a sector with radius 20 feet and central angle 135° . Find the area of the bed and the length of the curved edge, each to the nearest tenth.