Circle Properties Quiz

Grade Level: Grade 8 | **Date:** 2025-11-16 18:50:39

Instructions: Answer all questions. Show your work where applicable.

Question 1: In the description provided, what is the label for the center of the circle?

A) P
B) L
C) A
D) O

Question 2: If a circle has a diameter of 14 cm, what is the length of its radius?

A) 7 cm
B) 14 cm
C) 28 cm
D) 3.5 cm

Question 3: The text mentions that line segments PL and AM are 'perpendicular diameters'. What does it mean for two line segments to be perpendicular?

Answer: _____

Question 4: Which of the following statements is always true about the diameters of a circle?

A) They are always perpendicular to each other.
B) They are the longest chords in the circle.
C) They always have different lengths.
D) They do not necessarily pass through the center.

Question 5: Based on the description: 'Consider a circle with centre O. Line segments PL and AM are two perpendicular diameters of the circle.' What specific geometric figure is formed by connecting the endpoints A, P, M, and L in order (APML)?

Answer: _____

Answer Key

Question 1: D) O

Explanation: The text explicitly states, 'Consider a circle with centre O.'

Question 2: A) 7 cm

Explanation: The radius of a circle is always half the length of its diameter.

Question 3: It means they intersect each other at a 90-degree (right) angle.

Explanation: Perpendicular lines or segments are defined by their intersection forming a right angle.

Question 4: B) They are the longest chords in the circle.

Explanation: A diameter is a special type of chord that passes through the center, making it the longest possible chord in any given circle.

Question 5: A square.

Explanation: When two perpendicular diameters intersect at the center of a circle, connecting their endpoints forms a quadrilateral whose diagonals are equal in length, bisect each other, and are perpendicular. These are the defining properties of a square.