Circles Fundamentals Quiz

Grade Level: Grade 8 | **Date:** 2025-11-16 16:29:07

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

Question 1: What is the special point in the middle of a circle from which all points on the circle are the same distance?

A) Vertex
B) Center
C) Corner
D) Edge

Question 2: A line segment that passes through the center of a circle and has its endpoints on the circle is called a:

A) Radius
B) Chord
C) Diameter
D) Tangent

Question 3: How many diameters can a single circle have?

Answer: _____

Question 4: If two diameters of a circle are described as 'perpendicular,' what is the angle formed where they intersect at the center of the circle?

A) 45 degrees
B) 90 degrees
C) 180 degrees
D) 360 degrees

Question 5: In a circle with center O, if PL and AM are two perpendicular diameters, what geometric figure is formed by connecting points A, P, M, and L in order (APML)?

Answer: _____

Answer Key

Question 1: B) Center

Explanation: The center is the point from which all points on the circle are equidistant.

Question 2: C) Diameter

Explanation: A diameter is a special type of chord that always passes through the center of the circle.

Question 3: Infinitely many

Explanation: A circle can have an unlimited number of diameters, as any line segment passing through the center with endpoints on the circle is a diameter.

Question 4: B) 90 degrees

Explanation: Perpendicular lines or segments intersect to form a right angle, which measures exactly 90 degrees.

Question 5: Square

Explanation: When two perpendicular diameters intersect at the center, they form four right angles. Since all radii (OA, OP, OM, OL) are equal, and the diagonals (PL and AM) are equal and bisect each other at 90 degrees, the resulting quadrilateral APML is a square.