Circles Quiz PDF

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What is the formula for the area of a circle?

- ◯ π d
- ◯ 2π r
- ◯ π r^2
- ◯ π $r^2/2$

What is the term for the distance around a circle?

- ◯ Radius
- ◯ Diameter
- ◯ Circumference
- ◯ Area

What is the value of π approximately?

- ◯ 2.14
- ◯ 3.14
- ◯ 4.14
- ◯ 5.14

If the radius of a circle is 5 units, what is the diameter?

- ◯ 5 units
- ◯ 10 units
- ◯ 15 units
- ◯ 20 units

Which angle is formed by two radii of a circle?

- ◯ Inscribed Angle
- ◯ Central Angle

- ◯ External Angle
- ◯ Interior Angle

What is the significance of π in the context of circles, and how is it used in calculations?

- ◯ π is a variable
- ◯ π is the ratio of circumference to diameter
- ◯ π is only used in geometry
- ◯ π is equal to 3

How does the concept of a tangent differ from that of a chord in a circle?

- ◯ A tangent intersects the circle at two points
- ◯ A tangent touches the circle at one point
- ◯ A chord is a line that touches the circle
- ◯ A chord has one endpoint on the circle

What are the characteristics of a tangent to a circle? (Select all that apply)

- ☐ It intersects the circle at two points
- ☐ It is perpendicular to the radius at the point of contact
- ☐ It is a type of chord
- ☐ It touches the circle at exactly one point

Which of the following statements are true about a cyclic quadrilateral? (Select all that apply)

- ☐ All its vertices lie on a circle
- ☐ Opposite angles are supplementary
- ☐ It has a tangent at each vertex
- ☐ Its diagonals are equal

Explain how you would construct a circle given a fixed radius using a compass and straightedge.

- ◯ Draw a line and connect two points
- ◯ Use a compass to draw a circle
- ◯ Use a ruler to measure the radius
- ◯ Draw a square and round the corners

Explain the relationship between the radius and the diameter of a circle.

- ◯ The diameter is half the radius
- ◯ The diameter is equal to the radius
- ◯ The diameter is twice the radius
- ◯ The radius is equal to the diameter

Describe how to calculate the area of a sector given the radius and the central angle.

- ◯ Area = πr^2
- ◯ Area = $(\theta/360°) \times \pi r^2$
- ◯ Area = $2\pi r$
- ◯ Area = πr

What is the term for a line that touches a circle at exactly one point?

- ◯ Chord
- ◯ Secant
- ◯ Tanget
- ◯ Radius

Which of the following are parts of a circle? (Select all that apply)

- ☐ Radius
- ☐ Tangen
- ☐ Arc
- ☐ Ellipse

Which of the following formulas can be used to calculate the circumference of a circle? (Select all that apply)

- ☐ π d
- ☐ 2π r
- ☐ π r^2
- ☐ π d/2

Which of the following is a segment of a circle bounded by a chord and the arc it subtends?

- ◯ Sector
- ◯ Segment
- ◯ Annulus
- ◯ Quadrant

Which of the following are properties of a circle? (Select all that apply)

- [ ] All radii are equal
- [ ] It has exactly two diameters
- [ ] It is a closed curve
- [ ] The sum of angles in a circle is 360 degrees

Which of the following are true about the diameter of a circle? (Select all that apply)

- [ ] It is twice the radius
- [ ] It is the longest chord
- [ ] It is equal to the circumference
- [ ] It divides the circle into two equal parts

Which of the following is a line segment that passes through the center of a circle and has its endpoints on the circle?

- ◯ Radius
- ◯ Diameter
- ◯ Chord
- ◯ tangent

Provide a real-world example where understanding the properties of circles is essential.

- ◯ Design of wheels and gears
- ◯ Construction of buildings
- ◯ Painting a wall
- ◯ Writing a book