Circles Quiz

1. The diameter of a circle is:
   A) Twice the radius
   B) Half the circumference
   C) Equal to the radius
   D) Thrice the radius

2. A chord of a circle which is twice as long as its radius is a:
   A) Diameter
   B) Sector
   C) Segment
   D) Semicircle

3. The longest chord of a circle is the:
   A) Radius
   B) Diameter
   C) Arc
   D) Sector

4. A tangent to a circle is a line that:
   A) Intersects the circle in two points
   B) Intersects the circle in exactly one point
   C) Is inside the circle
   D) Is the diameter of the circle

5. If two circles touch each other externally, the distance between their centers is equal to:
   A) Sum of their radii
   B) Difference of their radii
   C) Product of their radii
   D) None of the above

6. The common chord of two intersecting circles divides each circle into:
   A) Two segments
   B) Two sectors
   C) Two arcs
   D) Four segments

7. If the distance between the centers of two circles is less than the sum of their radii but greater than their difference, the circles will:
   A) Touch externally
   B) Intersect in two points
   C) Touch internally
   D) Not touch or intersect

8. Two tangents drawn to a circle from an external point are:
   A) Parallel to each other
   B) Perpendicular to each other
   C) Equal in length
   D) Not equal in length

9. The angle between a tangent to a circle and the radius drawn to the point of contact is:
A) Acute
B) Right
C) Obtuse
D) Straight

10. The number of tangents that can be drawn from a point lying outside the circle is:
A) One
B) Two
C) Three
D) Infinite

11. If two circles are congruent, they have:
A) The same center
B) The same radius
C) The same circumference
D) All of the above

12. The circle with center at the origin and radius 5 units has the equation:
A) (x^2 + y^2 = 10)
B) (x^2 + y^2 = 25)
C) (x^2 + y^2 = 5)
D) (x^2 + y^2 = 50)

13. A sector is a part of a circle bounded by:
A) Two radii and the circumference
B) Two chords
C) Two tangents
D) A radius and a tangent

14. The perimeter of a semicircle of radius r is:
A) (pi r)
B) (2pi r)
C) (pi r + 2r)
D) (2pi r + r)

15. In a circle, parallel chords create arcs which are:
A) Congruent
B) Similar
C) Complementary
D) Supplementary

16. The area of a circle with a radius of 7 cm is:
A) (44) cm(^2)
B) (154) cm(^2)
C) (22) cm(^2)
D) (88) cm(^2)

17. A cyclic quadrilateral is a quadrilateral:
A) With all sides equal
B) With one pair of opposite sides parallel

C) Whose vertices all lie on the circumference of a circle
D) With all angles equal

18. If a circle is inscribed in a triangle, the tangents to the circle from the vertices of the triangle are:
A) Perpendicular to the sides of the triangle
B) Parallel to the sides of the triangle
C) Equal in length from each vertex to the point of tangency
D) Bisected by the sides of the triangle

19. An arc is a part of the circumference of a circle.

Its length compared to the circumference is the same as the:
A) Angle subtended by the arc at the center compared to 180°
B) Angle subtended by the arc at the center compared to 360°
C) Angle subtended by the arc at the circumference compared to 180°
D) Angle subtended by the arc at the circumference compared to 360°

20. The angle subtended at the center of a circle by an arc is double the angle subtended by it at any point on the remaining part of the circumference. This statement is known as:
A) The Perpendicular Diameter Theorem
B) The Angle Bisector Theorem
C) The Arc Angle Theorem
D) The Angle at the Center Theorem

Answer key
Here is the answer key for the "Circles" quiz:

1. A) Twice the radius
2. A) Diameter
3. B) Diameter
4. B) Intersects the circle in exactly one point
5. A) Sum of their radii
6. D) Four segments
7. B) Intersect in two points
8. C) Equal in length
9. B) Right
10. B) Two
11. B) The same radius
12. B) (x^2 + y^2 = 25)
13. A) Two radii and the circumference
14. C) (pi r + 2r)
15. A) Congruent
16. B) (154) cm(^2)
17. C) Whose vertices all lie on the circumference of a circle
18. C) Equal in length from each vertex to the point of tangency
19. B) Angle subtended by the arc at the center compared to 360°
20. D) The Angle at the Center Theorem

Let me know if you're ready to continue to the next chapter's quiz.