

MATHEMATICS**CLASS 9****Chapter 5: "I'm Up and Down, and Round and Round"****WORKSHEET**

Name: _____

Class/Section: _____

Date: _____

Instructions: Choose the correct option (A, B, C or D) for each question.

Q1. A circle is the set of all points in a plane that are at a fixed distance from a fixed point. The fixed point is called the:

- A. Radius
- C. Centre

- B. Chord
- D. Diameter

Q2. The fixed distance from the centre of a circle to any point on the circle is called the:

- A. Chord
- C. Diameter

- B. Radius
- D. Arc

Q3. A line segment joining any two points on a circle is called a:

- A. Radius
- C. Diameter

- B. Chord
- D. Secant

Q4. The longest chord of a circle is the:

- A. Radius
- C. Diameter

- B. Arc
- D. Perpendicular bisector

Q5. If the radius of a circle is 8 cm, its diameter is:

- A. 4 cm
- C. 12 cm

- B. 8 cm
- D. 16 cm

Q6. How many circles can pass through two distinct points?

- A. Exactly one
- C. Infinitely many

- B. Exactly two
- D. None

Q7. The centres of all circles passing through two fixed points lie on the:

- A. Chord joining the points
- B. Perpendicular bisector of the segment joining the points
- C. Diameter through one point
- D. Tangent at either point

Q8. Through any three non-collinear points, how many circles can be drawn?

- A. None
- B. Exactly one
- C. Exactly two
- D. Infinitely many

Q9. The circle passing through the three vertices of a triangle is called its:

- A. Incircle
- B. Circumcircle
- C. Semicircle
- D. Concentric circle

Q10. The centre of the circumcircle of a triangle is called the:

- A. Incentre
- B. Orthocentre
- C. Circumcentre
- D. Centroid

Q11. In an acute-angled triangle, the circumcentre lies:

- A. Inside the triangle
- B. Outside the triangle
- C. On a vertex
- D. On one side only

Q12. In an obtuse-angled triangle, the circumcentre lies:

- A. Inside the triangle
- B. Outside the triangle
- C. At the midpoint of the longest side
- D. On the shortest side

Q13. In a right-angled triangle, the circumcentre is located at the:

- A. Incentre
- B. Midpoint of the hypotenuse
- C. Vertex containing the right angle
- D. Centroid

Q14. If two chords of the same circle are equal, then the angles subtended by them at the centre are:

- A. Unequal
- C. Equal

- B. Supplementary
- D. Right angles

Q15. If two chords of a circle subtend equal angles at the centre, then the chords are:

- A. Equal
- C. Perpendicular

- B. Parallel
- D. Diameters only

Q16. The perpendicular from the centre of a circle to a chord:

- A. Doubles the chord
- C. Is parallel to the chord

- B. Bisects the chord
- D. Never meets the chord

Q17. A chord that is at the greatest possible distance from the centre is:

- A. The diameter
- C. A tangent

- B. A very short chord
- D. The radius

Q18. Equal chords of a circle are:

- A. At equal distances from the centre
- B. Always diameters
- C. Always perpendicular
- D. At different distances from the centre

Q19. The angle subtended by an arc at the centre is ____ the angle subtended by the same arc at a point on the remaining part of the circle.

- A. Half
- C. Twice

- B. Equal to
- D. Four times

Q20. An angle subtended by a diameter at any point on the circle is:

- A. 45°
- C. 90°

- B. 60°
- D. 180°

Q21. If an arc subtends an angle of 40° at a point on the circle, the angle subtended by the same arc at the centre is:

A. 20° B. 40° C. 80° D. 120°

Q22. If $\angle AOC = 120^\circ$ at the centre of a circle, where A and C are points on the circle, the angle subtended by the same arc AC at a point B on the remaining circle is:

A. 30° B. 60° C. 120° D. 240°

Q23. Four points lying on the same circle are said to be:

A. Collinear

B. Concentric

C. Concyclic

D. Parallel

Q24. A quadrilateral whose four vertices lie on a single circle is called a:

A. Parallelogram

B. Cyclic quadrilateral

C. Rhombus

D. Trapezium

Q25. In a cyclic quadrilateral, the sum of a pair of opposite angles is:

A. 90° B. 120° C. 180° D. 360°

ANSWER KEY

Question	Correct Answer	Answer
1	C	Centre
2	B	Radius
3	B	Chord
4	C	Diameter
5	D	16 cm
6	C	Infinitely many
7	B	Perpendicular bisector
8	B	Exactly one
9	B	Circumcircle
10	C	Circumcentre
11	A	Inside the triangle
12	B	Outside the triangle
13	B	Midpoint of the hypotenuse
14	C	Equal
15	A	Equal
16	B	Bisects the chord
17	B	A very short chord
18	A	At equal distances from the centre
19	C	Twice
20	C	90°
21	C	80°
22	B	60°
23	C	Concyclic
24	B	Cyclic quadrilateral
25	C	180°

Chapter coverage: circle and its elements, symmetry, circles through points, circumcircle and circumcentre, chords, perpendicular bisectors, angles subtended by arcs, angle in a semicircle, concyclicity, and cyclic quadrilaterals.