



Class 10 Mathematics | Areas Related To Circles

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Area of a circle of radius 7 cm, using $\pi=22/7$, is:

A. 44 cm^2 B. 49 cm^2 C. 308 cm^2 D. 154 cm^2

2. A sector has radius 6 cm and angle 60° . Its area is:

A. $36\pi \text{ cm}^2$ B. $12\pi \text{ cm}^2$ C. $6\pi \text{ cm}^2$ D. $3\pi \text{ cm}^2$

3. A 90° arc of radius 8 cm has length:

A. $16\pi \text{ cm}$ B. $2\pi \text{ cm}$ C. $4\pi \text{ cm}$ D. $8\pi \text{ cm}$

4. Perimeter of a semicircle of radius 7 cm ($\pi=22/7$) is:

A. 29 cm B. 36 cm C. 22 cm D. 44 cm

5. Area of a quadrant of radius 10 cm is:

A. $25\pi \text{ cm}^2$ B. $10\pi \text{ cm}^2$ C. $50\pi \text{ cm}^2$ D. $100\pi \text{ cm}^2$

6. An annulus has outer radius 5 cm, inner radius 3 cm. Area is:

A. $8\pi \text{ cm}^2$ B. $16\pi \text{ cm}^2$ C. $34\pi \text{ cm}^2$ D. $4\pi \text{ cm}^2$

7. An arc of radius 12 cm has length $4\pi \text{ cm}$. Central angle is:

A. 90° B. 60° C. 30° D. 120°

8. A sector angle is 120° and radius 9 cm. Area is:

A. $81\pi \text{ cm}^2$ B. $27\pi \text{ cm}^2$ C. $9\pi \text{ cm}^2$ D. $54\pi \text{ cm}^2$

9. A 90° segment of a radius 4 cm circle has area:

A. $4\pi-8 \text{ cm}^2$ B. $16\pi-8 \text{ cm}^2$
C. $4\pi+8 \text{ cm}^2$ D. $8\pi-8 \text{ cm}^2$

10. A circular track has radius 14 m. One lap length, using $\pi=22/7$, is:

A. 616 m B. 44 m C. 28 m D. 88 m

11. If circumference doubles, the area becomes:

A. 2 times B. 8 times C. unchanged D. 4 times

12. A circle has area $49\pi \text{ cm}^2$. Its circumference is:

A. $49\pi \text{ cm}$ B. $7\pi \text{ cm}$ C. $28\pi \text{ cm}$ D. $14\pi \text{ cm}$

13. A sector's radius is 5 cm and arc length is 6 cm. Its perimeter is:

A. 21 cm B. 30 cm C. 11 cm D. 16 cm

14. A circle is inscribed in a square of side 10 cm. Uncovered area is:

A. $25-10\pi \text{ cm}^2$ B. $100-25\pi \text{ cm}^2$
C. $100-100\pi \text{ cm}^2$ D. $100-50\pi \text{ cm}^2$

15. A minute hand is 7 cm long. Area swept in 20 minutes is:

A. $98\pi/3 \text{ cm}^2$ B. $49\pi \text{ cm}^2$
C. $49\pi/3 \text{ cm}^2$ D. $14\pi/3 \text{ cm}^2$

ANSWER KEY — check after completing all 15 questions

1.D 2.C 3.C 4.B 5.A 6.B 7.B 8.B 9.A 10.D 11.D 12.D 13.D 14.B 15.C

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper

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