

Area of a Circle

Chapter 14: Area · Topic 2

Key Concept

For example, a circle with radius 7cm has an area of $(22/7) \times 7 \times 7 = 154 \text{ cm}^2$. This formula has countless practical applications, from calculating the amount of material needed for a circular tablecloth or pizza, to determining the cross-sectional area of a circular pipe, making it one of the most frequently used geometric formulas in everyday life and various professions like engineering and design.

Quick Revision Notes

- Area of a circle: $A = \pi r^2$ (pi times radius squared).
- Doubling a circle's radius makes its area 4 times larger, not 2 times.
- Example: radius 7cm gives area $(22/7) \times 7 \times 7 = 154 \text{ cm}^2$.
- Practical applications: tablecloths, pizzas, pipe cross-sections, engineering design.

Practice Questions

- 1 Find the area of a circle with radius 14cm (use $\pi=22/7$).
- 2 Explain why doubling a circle's radius makes its area 4 times larger, not 2 times.
- 3 Calculate the area of a circular tablecloth with diameter 1.4m.