

Squares and Square Roots

Chapter 3: Squares and Square Roots · Topic 1

Key Concept

A square number, like 25 (5×5), results from multiplying a number by itself, and we write this as 5^2 .

The square root of a number, written as $\sqrt{25}$, is the value that when squared gives that number - so $\sqrt{25} = 5$.

We can find square roots using methods like prime factorisation or the long division method for larger numbers.

Understanding squares and square roots is essential for solving geometry problems, like finding side lengths using area.

Quick Revision Notes

- A square number results from multiplying by itself.
- $25 = 5^2$ (5×5).
- A square root is the inverse of squaring.
- $\sqrt{25} = 5$.
- We can find square roots by prime factorisation.
- The long division method works for larger numbers.
- Squares and roots help solve geometry problems.
- They help find side lengths from area.

Practice Questions

- 1 Calculate 6^2 and 9^2 .
- 2 Find $\sqrt{36}$ and $\sqrt{100}$.
- 3 Use prime factorisation to find $\sqrt{144}$.
- 4 Discuss the relationship between squaring and square roots.
- 5 Solve a geometry problem using square roots.
- 6 Practice five square and square root calculations.