

Perfect Squares

Chapter 1: A Square and A Cube · Topic 1

Key Concept

Perfect squares always end in specific digits: 0, 1, 4, 5, 6, or 9 — never in 2, 3, 7, or 8, a useful quick check to rule out whether a number could be a perfect square. Patterns also exist among perfect squares, like the fact that the difference between consecutive perfect squares always increases by 2 (1,4,9,16... differ by 3,5,7...), reflecting a deeper algebraic identity connecting squares and odd numbers.

Quick Revision Notes

- A perfect square is formed by multiplying an integer by itself (e.g., 4, 9, 16, 25).
- Perfect squares always end in 0, 1, 4, 5, 6, or 9 — never 2, 3, 7, or 8.
- The difference between consecutive perfect squares increases by 2 each time.
- Perfect squares are directly related to the area of a square shape.

Practice Questions

- 1 Find the square of 15.
- 2 Determine which of these could be a perfect square: 47, 64, 78, 100.
- 3 Verify that the difference between the 3rd and 4th perfect squares follows the 'increases by 2' pattern.