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A Square and A Cube

Understanding Squares and Cubes in Mathematics

DEFINITION

A square is a number multiplied by itself, while a cube is a number multiplied by itself twice.

KEY CONCEPTS

Square Number

A square number is the result of a number multiplied by itself, like 4 (2x2).

Cube Number

A cube number is the result of a number multiplied by itself twice, like 8 (2x2x2).

Perfect Squares

Numbers like 1, 4, 9, and 16 are perfect squares, as they can be expressed as squares.

Perfect Cubes

Numbers like 1, 8, 27, and 64 are perfect cubes, as they can be expressed as cubes.

Square Root

The square root of a number is the value that, when multiplied by itself, gives that number.

Cube Root

The cube root of a number is the value that, when multiplied by itself twice, gives that number.

EXAMPLES

→ 3 squared is 9 (3x3).

→ 2 cubed is 8 (2x2x2).

→ The square root of 16 is 4.

MEMORY TIPS

★ Remember: Square has 4 sides, cube has 6 faces.

★ Think of a square as a '2D box' and a cube as a '3D box'.

★ Use the phrase 'Square it, Cube it' to recall their definitions.

COMMON MISTAKES

✗ Confusing squares with cubes, especially in calculations.

✗ Forgetting to multiply correctly when finding squares or cubes.

✗ Misidentifying square roots and cube roots.

QUICK RECAP

Squares are numbers multiplied by themselves, while cubes are multiplied by themselves twice. Remember to differentiate between square roots and cube roots for accurate calculations.