

Perfect Cube

Examples & Non-Examples

✓ Example	✓ Example	✗ Non-Example
8 is a perfect cube because $2^3 = 8$	– 64 is a perfect cube because $-4^3 = -64$	16 is NOT a perfect cube because $4^2 = 16$

Definition

A **perfect cube** in math is a number that can be expressed as the cube of an integer. In other words, it is a number that results from multiplying an integer by itself three times.

Mathematically, a number x is a perfect cube if there exists an integer n such that:

$$x = n^3$$

For example:

- 8 is a perfect cube because $2^3 = 8$.
- 27 is a perfect cube because $3^3 = 27$.
- – 64 is a perfect cube because $-4^3 = -64$.

The perfect cubes of the first few integers are:

$$1^3 = 1, 2^3 = 8, 3^3 = 27, 4^3 = 64, 5^3 = 125, \dots$$

Perfect cubes can be positive or negative, depending on whether the integer being cubed is positive or negative.

