

Max's Magnificent Cube Number Challenges

Learning objective: To identify, calculate, and apply knowledge of cube numbers up to 12^3 in various mathematical contexts.

Max the monkey has been busy calculating! Use these flashcards to master the concept of cube numbers. Read the question on the front, think about the calculation, and check your answer on the back.

What is the definition of a cube number?

A number resulting from multiplying an integer by itself and then by itself again ($n \times n \times n$).

Calculate 1 cubed (1^3).

1 ($1 \times 1 \times 1 = 1$).

Calculate 2 cubed (2^3).

8 ($2 \times 2 \times 2 = 8$).

Calculate 3 cubed (3^3).

27 ($3 \times 3 \times 3 = 27$).

Calculate 4 cubed (4^3).

64 ($4 \times 4 \times 4 = 64$).

Calculate 5 cubed (5^3).

125 ($5 \times 5 \times 5 = 125$).

Calculate 10 cubed (10^3).

1,000 ($10 \times 10 \times 10 = 1,000$).

If a cube-shaped box has a side length of 6cm, what is its volume?

216cm^3 ($6 \times 6 \times 6 = 216$).

Which is larger: 2^3 or 3^2 ?

They are equal ($2^3 = 8$, $3^2 = 9$). Wait— 3^2 is 9, so 3^2 is larger!

Explain why cube numbers are called 'cube' numbers.

Because they represent the volume of a geometric cube with equal side lengths.

If $7^3 = 343$, what is 70^3 ?

343,000 ($70 \times 70 \times 70 = 343,000$).

Find the missing number: $?^3 = 512$.

8 ($8 \times 8 \times 8 = 512$).