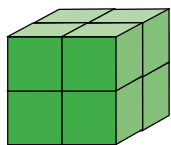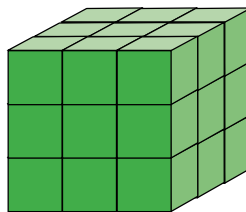# Cube Numbers

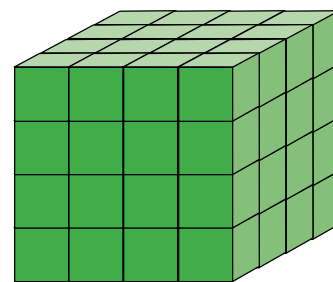Look at the cubes. Count the number of small cubes in each big cube.

Big cube side length: 1
$1 \times 1 \times 1 = 1$
Total number of small cubes = **1**

Big cube side length: 2
$2 \times 2 \times 2 = 8$
Total number of small cubes = **8**

Big cube side length: 3
$3 \times 3 \times 3 = 27$
Total number of small cubes = **27**

Big cube side length: 4
$4 \times 4 \times 4 = 64$
Total number of small squares = **64**

Use small cubes to make the next 6 big cubes in this pattern.

A.   Complete the pattern of cube numbers:

$1 \times 1 \times 1$ = 1
$2 \times 2 \times 2$ = 8
$3 \times 3 \times 3$ = 27
$4 \times 4 \times 4$ =
$5 \times 5 \times 5$ =

$6 \times 6 \times 6$ =
$7 \times 7 \times 7$ =
$8 \times 8 \times 8$ =
$9 \times 9 \times 9$ =
$10 \times 10 \times 10$ =

> $4 \times 4 \times 4 = 64$, which is a cube number.
> Another way to show a cube number is the notation 4^3. 4^3 means $4 \times 4 \times 4$.

B.   Write what the following mean:
1). 8^3,   2). 2^3,   3). 9^3,   4). 10^3,
5). 1^3,   6). 5^3,   7). 3^3,   8). 7^3.

> 4^3 is said as '*four cubed*'.

C.   Write in words how you say the following:
1). 2^3,   2). 7^3,   3). 1^3,   4). 8^3,
5). 5^3,   6). 10^3,   7). 9^3,   8). 3^3.

> The value of $4^3 = 4 \times 4 \times 4 = 64$.

D.   Find the value of:
1). 5^3,   2). 1^3,   3). 7^3,   4). 10^3,
5). 2^3,   6). 8^3,   7). 3^3,   8). 9^3.

> Learn these cube numbers off by heart: **1**, **8**, **27**, **64**, **125**.