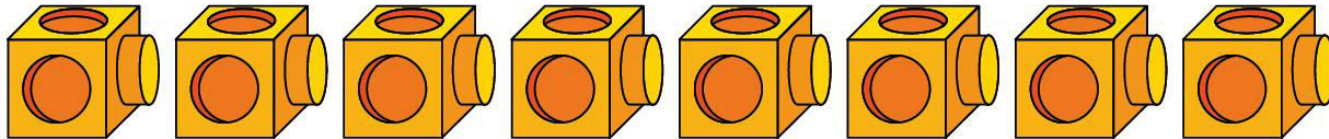


Cube numbers

- 1 a) Fit 8 multilink cubes together to make a larger cube.



- b) Is it possible to fit 9 multilink cubes together to make a larger cube? _____

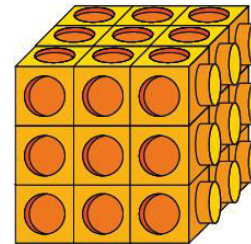
Explain your answer.





2

Filip makes a cube using some smaller cubes.



a) How many cubes make up this cube?

b) How did you work out the number of cubes?

c) This number is an example of a cube number.

Why do you think it is a cube number?





3

a) Complete the table of cube numbers.

2^3	$2 \times 2 \times 2$	8
3^3	$3 \times 3 \times 3$	
4^3	$4 \times 4 \times 4$	

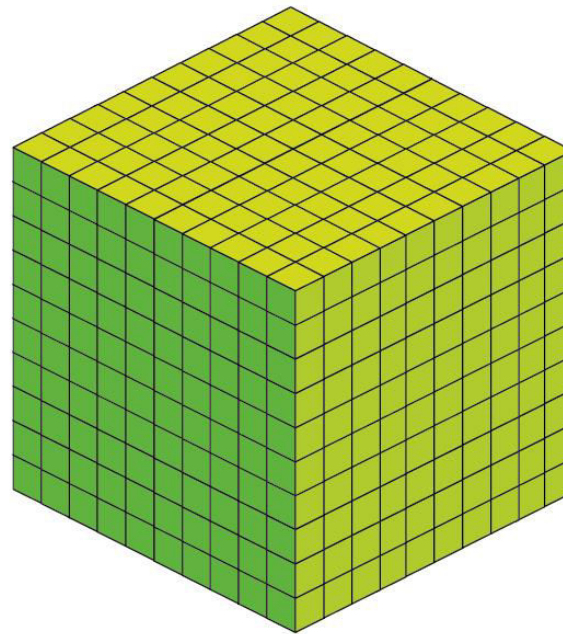
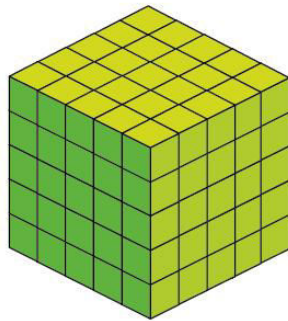
b) What would the next cube number in the table be?

$$\square^3 = \square \times \square \times \square = \square$$

4

Complete the statements.

Use the cubes to help you.



a)

$5^3 =$

5 cubed =

$5 \times 5 \times 5 =$

b)

$10^3 =$

10 cubed =

$10 \times 10 \times 10 =$

5 a) Which calculation is the same as 6^3 ?

Tick your answer.

$$6 \times 3$$

$$6 + 6 + 6$$

$$6 \times 6 \times 6$$

b) Kim has worked out 6^3 using this method.

$$\begin{aligned} 6^3 &= (6 \times 6) \times 6 \\ &= 36 \times 6 \\ &= 216 \end{aligned}$$

	30	6
6	$30 \times 6 = 180$	$6 \times 6 = 36$
	$180 + 36 = 216$	

Is Kim's method correct? _____

5

How do you know?

c) Match the cube numbers to the calculations.

One has been done for you.

4^3

4×2

5^3

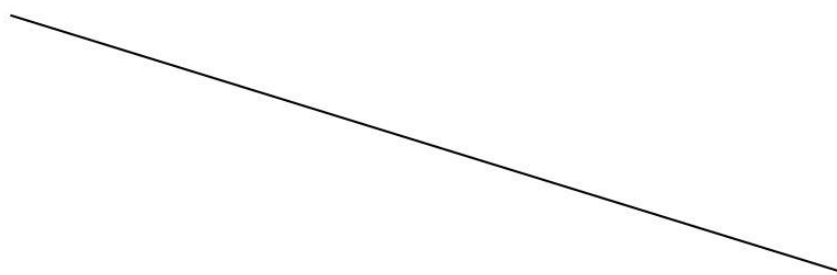
9×3

2^3

16×4

3^3

25×5

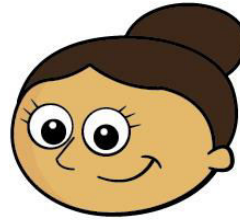


6 Calculate 7^3



7

1^3 is 1, and
 3^3 is 9



What mistake has Dora made?

Why might she have made this mistake?



8

Scott's age is a cube number.

His sister is 2 years younger than him.

Her age is a square number.

In 3 years, Scott's age will be a multiple of 10

How old is Scott?

Scott is years old.