

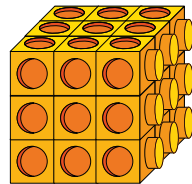
- 1 a) Fit 8 linking cubes together to make a larger cube.



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

Explain your answer.

- 2 Filip uses small cubes to make this large cube.



- a) How many small cubes does he use?
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 cubed numbers.

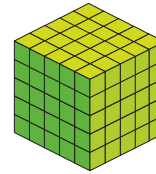
2^3	$2 \times 2 \times 2$	8
3^3	$3 \times 3 \times 3$	
4^3	$4 \times 4 \times 4$	

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



- 4 Complete the statements.
Use the cubes to help you.

a)

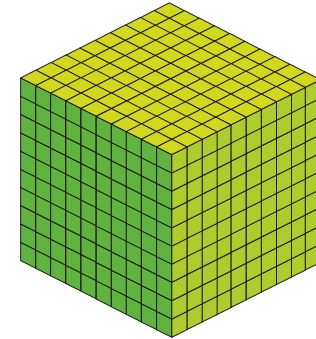


$$5^3 = \boxed{}$$

$$5 \text{ cubed} = \boxed{}$$

$$5 \times 5 \times 5 = \boxed{}$$

b)



$$10^3 = \boxed{}$$

$$10 \text{ cubed} = \boxed{}$$

$$10 \times 10 \times 10 = \boxed{}$$

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

$$6 \times 3$$

$$6 + 6 + 6$$

$$6 \times 6 \times 6$$

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

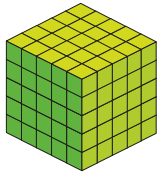
$6^3 = (6 \times 6) \times 6$	30	6
$= 36 \times 6$	6	$30 \times 6 = 180$
$= 216$	$6 \times 6 = 36$	$180 + 36 = 216$

Is Kim's method correct?

How do you know?

- 4 Complete the statements.
Use the cubes to help you.

a)

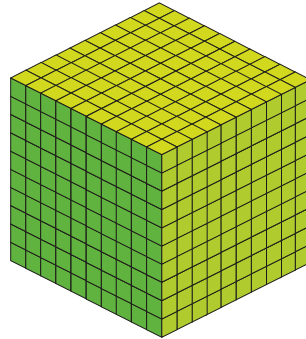


$$5^3 = \square$$

$$5 \text{ cubed} = \square$$

$$5 \times 5 \times 5 = \square$$

b)



$$10^3 = \square$$

$$10 \text{ cubed} = \square$$

$$10 \times 10 \times 10 = \square$$

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

$$6 \times 3$$

$$6 + 6 + 6$$

$$6 \times 6 \times 6$$

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

$6^3 = (6 \times 6) \times 6$	30	6
$= 36 \times 6$	6	$30 \times 6 = 180$
$= 216$	$180 + 36 = 216$	$6 \times 6 = 36$

Is Kim's method correct?

How do you know?

- c) Match the cube numbers to the calculations.

One has been done for you.

$$4^3$$

$$5^3$$

$$2^3$$

$$3^3$$

$$4 \times 2$$

$$9 \times 3$$

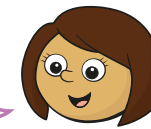
$$16 \times 4$$

$$25 \times 5$$

- 6 Calculate 7^3

7

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



What mistake do you think Kim has made?

Why might she have made this mistake?

Talk about it with a partner.

- 8 Mr Lee's age is a cube number.

His sister is 2 years younger than him.

Her age is a square number.

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

How old is Mr Lee?