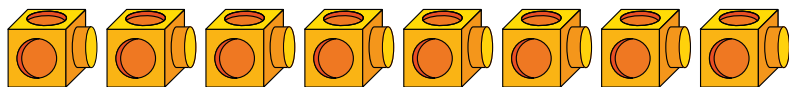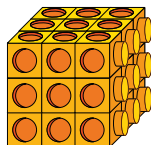**1** **a)** Fit 8 multilink cubes together to make a larger cube.

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.
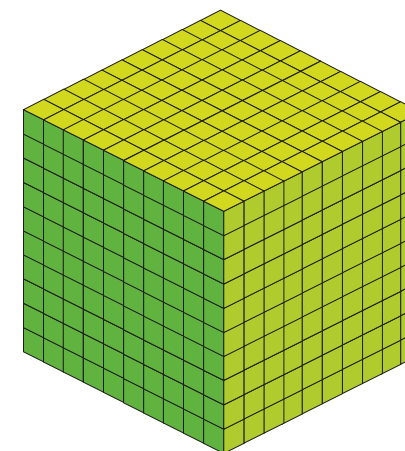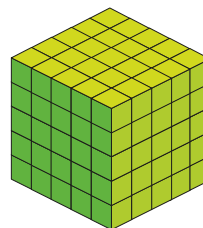
Why do you think it is a cube number?

3 **a)** Complete the table of cube numbers.

2^3	2 × 2 × 2	8
3^3	3 × 3 × 3	
4^3	4 × 4 × 4	

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

4 Complete the statements.

Use the cubes to help you.

a) $5^3 =$ ⬚

5 cubed = ⬚

5 × 5 × 5 = ⬚

b) $10^3 =$ ⬚

10 cubed = ⬚

10 × 10 × 10 = ⬚

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

6 × 3   6 + 6 + 6   6 × 6 × 6

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

$6^3 = (6 × 6) × 6$

$\quad = 36 × 6$

$\quad = 216$

	30	6
6	30 × 6 = 180	6 × 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) $5^3 = \boxed{}$

5 cubed $= \boxed{}$

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

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

10 cubed $= \boxed{}$

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

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

6×3 $\qquad$ $6 + 6 + 6$ $\qquad$ $6 \times 6 \times 6$
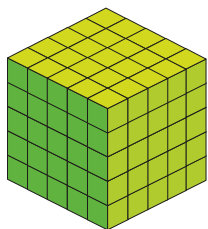
b) Kim has worked out 6^3 using this method.

$6^3 = (6 \times 6) \times 6$

$\quad = 36 \times 6$

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	30	6
6	30 × 6 = 180	6 × 6 = 36
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Is Kim's method correct?

How do you know?

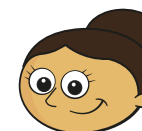**c)** Match the cube numbers to the calculations.

One has been done for you.

4^3	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?