

Using and recognising square and cube numbers.

If you are a little unsure, or feel you need some fluency practise, complete Task A.

If you are more confident, complete Task B.

Task A

Square Numbers

The product of a number multiplied by itself.

Can be illustrated as a square, e.g.

$$2^2 = 2 \text{ squared} = 2 \times 2 = 4$$



A. Complete the table.

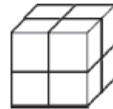
1^2	1×1	1
2^2		4
3^2	3×3	
	4×4	16
5^2		
		36
	7×7	
8^2		
10^2		100

Cube Numbers

The product of multiplying a digit by itself three times.

Can be illustrated as a cube, e.g.

$$2^3 = 2 \text{ cubed} = 2 \times 2 \times 2 = 8$$



B. Complete the table.

1^3	$1 \times 1 \times 1$	1
2^3	$2 \times 2 \times 2$	
3^3		27
	$4 \times 4 \times 4$	64
5^3	$5 \times 5 \times 5$	
6^3	$6 \times 6 \times 6$	
		343
8^3		512
	$9 \times 9 \times 9$	729
10^3		

Task B

a) $7^2 + 4^3 =$	b) $8^2 + 10^2 =$	c) $5^3 - 5^2 =$
d) $5^2 + \underline{\quad} = 89$	e) $\underline{\quad} - 8^2 = 17$	f) $3^2 \times 2^3 =$
g) $3^2 + \underline{\quad} = 5^2$	h) $6^3 \div 2^2 =$	i) $13^2 =$
j) $10^3 - 2^2 =$	k) $100^2 =$	l) $\underline{\quad}^2 = 144$

Go for it

Always, Sometimes,
Never.

A square number has an even number of factors.

Challenge

Last year my age was a square number.
Next year it will be a cube number.

- How old am I?
- How long must I wait until my age is both a square number and a cube?