HOME LEARNING

YEAR 6

12/05/2020

Morning Message

Good morning year 6,

For those of you missing school, here are some facts of the day about schools for you:

The largest school in the world (in terms of number of pupils) is the City Montessori School in Lucknow, India. As of 2019 it had 55, 547 pupils!

Students in South Korea are expected to stay and help clean the classroom when classes are over.

The highest school in the world is thought to be in Phumachangtang, Tibet. It is 5,373m above sea level – that's 200m higher than the base camp at Mount Everest!

Answer to yesterday's riddle: *short.* Today's riddle: *What has wheels and flies but is not an aircraft?*

Next week, you will have the chance to set the rest of the year the daily riddles and facts! If you have a riddle or fact that you would like included in the home learning, then write it in the comments section when you hand in your work on Purple Mash. We will choose different ones on different days – don't forget to include the answer!

Mr Larke and Ms Yerlisu

Today's Picture

Writing

It all happened so quickly! One minute he was standing on the platform, the next he was hurtling through the air, hanging on for dear life…

Your job is to write one story scene before the picture above and one scene that comes after the picture above.

Before: a boy and his dad are on a train going home. Where have they been? Day trip? A friend's house? School? Why is the boy carrying a camera? They step off the train. The boy thinks he has left something on train so goes to hold the door. The next thing he knows: he's hurtling through the air, hanging on for dear life…

After: you can choose what happens in your next scene. Maybe you could describe all the scenery and platforms that the boy passes as he is desperately clinging on. Maybe the train shoots off into an alternative world? What does the boy see? Maybe the train stops and leaves the boy in a dark, dark tunnel? The boy steps off and wanders towards a light….

Tips for success:

- use a variety of sentence lengths and structures for effect

- use powerful descriptive vocabulary

- build drama and tension to make the reader feel excited/scared/breathless

Reading

Day 2: Glossary

Choose words that you did not understand.

1. Find a definition.
2. Write which type of word it is ie. verb, adverb etc
3. Use the word in a sentence

Maths

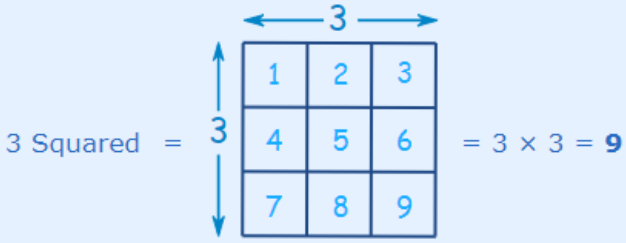
Square and Cube Numbers

In this lesson, you will learn to recognise and identify square and cube numbers and roots of square and cube numbers. You will explore how these numbers are different from others.

How to Square A Number

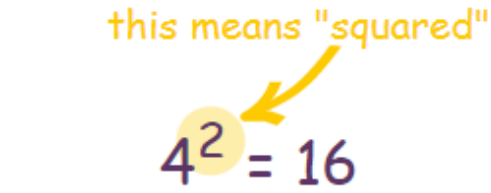
To square a number: **multiply it by itself**.

Example: What is 3 squared?



Remember 3 is not a squared number 9 is a squared number

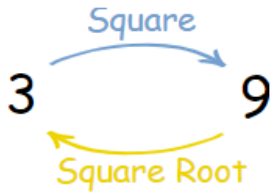
"Squared" is often written as a little 2 like this:



This says ***"4 Squared equals 16"***
(the little 2 says the number appears twice in multiplying)

Square Roots

A **square root** goes the other way:



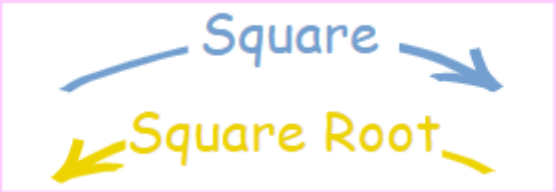
3 squared is 9, so a **square root of 9 is 3**

A square root of a number is ...

... a value that can be **multiplied by itself** to give the original number.

A square root of **9** is ...

... **3**, because **when 3 is multiplied by itself** we get **9**.



4		16
5		25
6		36

The Square Root Symbol

$\sqrt{}$ This is the special symbol that means "square root", it is sort of like a tick, and actually started hundreds of years ago as a dot with a flick upwards.

It is called the ***radical***, and always makes mathematics look important!

We use it like this:

$$\sqrt{9} = 3$$

and we say ***"square root of 9 equals 3"***

Example: What is √25?

25 = 5 × 5, in other words when we multiply 5 by itself (5 × 5) we get 25

So the answer is:

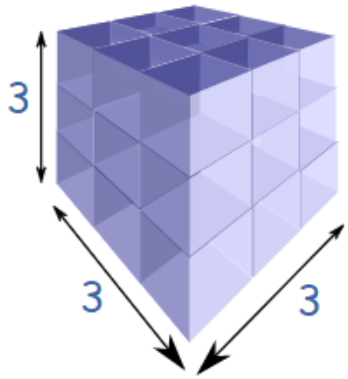
$$\sqrt{25} = 5$$

How to Cube A Number

To **cube** a number, just use it in a multiplication **3 times** ...

Example: What is 3 Cubed?

3 Cubed =



= 3 × 3 × 3 = 27

Note: we write "3 Cubed" as 3^3

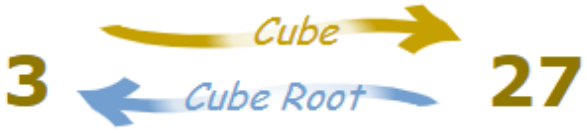
(the little ^{3} means the number appears three times in multiplying)

Remember 3 is not a cubed number 27 is a cubed number.

Cube Root

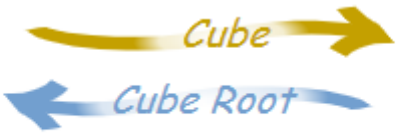
A **cube root** goes the other direction:

3 cubed is 27, so the **cube root of 27 is 3**



The cube root of a number is ...
... a special value that when **cubed** gives the original number.

The cube root of **27** is ...
... **3**, because **when 3 is cubed** you get **27**.



4		64
5		125
6		216

Example: What is the Cube root of 125?

Well, we just happen to know that **125 = 5 × 5 × 5** (if you use 5 three times in a multiplication you will get 125) ...

... so the cube root of 125 is 5

The Cube Root Symbol

This is the special symbol that means "cube root", it is the ***"radical"*** symbol (used for square roots) with a little three to mean **cube** root.

You can use it like this: $\sqrt[3]{27} = 3$ (we say "the cube root of 27 equals 3")

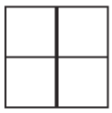
TASK

Square Numbers

The product of a number multiplied by itself.

Can be illustrated as a square, e.g

2^2 = 2 squared = 2 × 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 cubed = 2 × 2 × 2 = 8

B. Complete the table.

1^3	1 × 1 × 1	1
2^3	2 × 2 × 2	
3^3		27
	4 × 4 × 4	64
5^3	5 × 5 × 5	
6^3	6 × 6× 6	
		343
8^3		512
	9 × 9 × 9	729
10^3		

C. Calculate the missing numbers.

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

Write down the *square root* for each of these numbers: $\sqrt{121} = 11$

a. 16 = ___ b. 25 = _____ c. 49 = _____ d. 1 = _____

e. 81 = _____ f. 64 = _____ g. 100 = _____ h. 144 = _____

i. 169 = _____

Extension

Answer the following sums:

a. $2^2 + 5^3$= b. $5^2 - \sqrt{4}$ = c. $\sqrt{100} - 1$ = d. $\sqrt[3]{64} + 45$ =

e. $\sqrt{100} - \sqrt{4}$ = f. $9^2 - \sqrt{121}$ = g. $\sqrt{196} \div 2$ = h. $25 - \sqrt{169}$ =

i. $\sqrt[3]{27} \times 3^2$ =

Check mathletics

Weekly Spellings

We have finished learning and revising all the the year 5 and year 6 spelling patterns and words. Your job now is to take some responsility for your own learning and evaluate which words and which types of spelling patterns you need to continue to revise before year 7. From looking at last week's test, and the spelling section of the KS2 National Curriculum (ask an adult for help), you should have an idea of which patterns you need to revise most. We will be providing 15 additional tricky words each week for you to learn but these are not compulsory. It is more important that you revise all the spelling patterns from the KS2 National Curriculum first.

1. biased
2. hypothesis
3. medieval
4. jewellery
5. permanent
6. possession
7. vegetable
8. renewable
9. alliteration
10. analysis
11. ingredients
12. reference
13. ceremony
14. specimen
15. personification

Foundation Topic Work (for the week)

This week we will researching information about the Islamic holy month of Ramadan. Use the internet, any books you have on the subject and talk to your family. The task has been set on Purple Mash – use the template to present what you have learnt. Hand in to your teacher by Friday.

Diary

Write a diary of what work and activities you did today. Remember to include your thoughts, feelings and opinions.