

Knowledge Organiser

Year Group	Subject	Topic
6	Mathematics	Place Value

The Big Picture

Children will learn to read, write and represent numbers to ten million in different ways. They will compare and order numbers up to ten million using numbers presented in different formats. Children will use greater than and less than vocabulary, and the inequality symbols ($<$ $>$ $=$). Children will build on previous work on rounding; developing their existing skills, they will be given opportunities to round to 10 million. Children will use their knowledge of multiples to work out which two numbers the number they are rounding sits between. Children will continue their work on negative numbers by counting forwards and backwards through zero. They will be extending their learning by finding intervals across zero. They will be given opportunities to see negative numbers in context.

Enquiry Question

What does a zero in a number represent? What strategy do you use to work out the divisions on a number line? How many ways can you complete the partitioned number? What is the value of each digit? What is the value of x in this number? What is the value of the whole? Can you suggest other parts that make the whole? What are the 'rules' we use when rounding? Which place value column do we need to look at when we round the nearest 100,000? When is it best to round to 1,000? 10,000? Can you justify your reasoning? Are negative numbers whole numbers? Why do the numbers on a number line mirror each other from 0? Why does positive 1 add negative 1 equal 0? Draw me a picture to show 5 subtract 8

Key Vocabulary

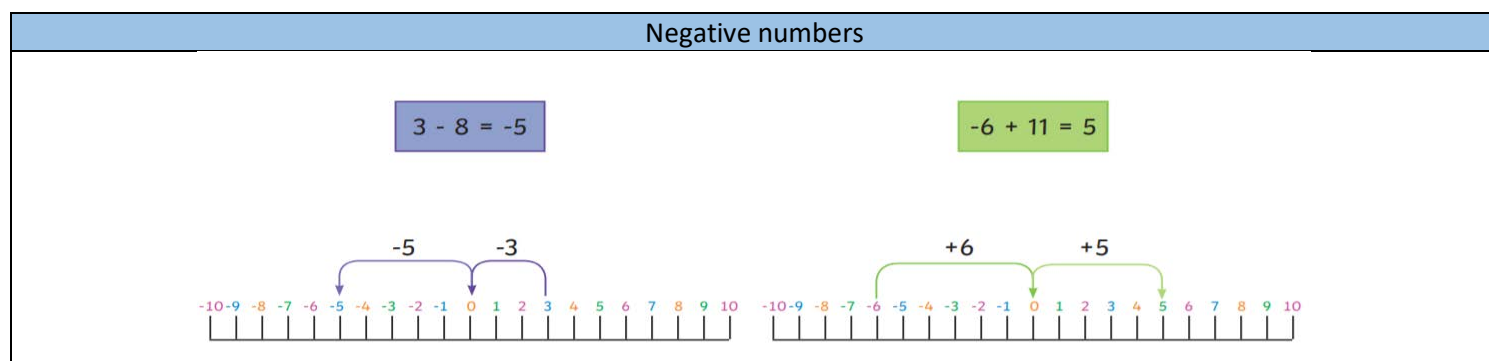
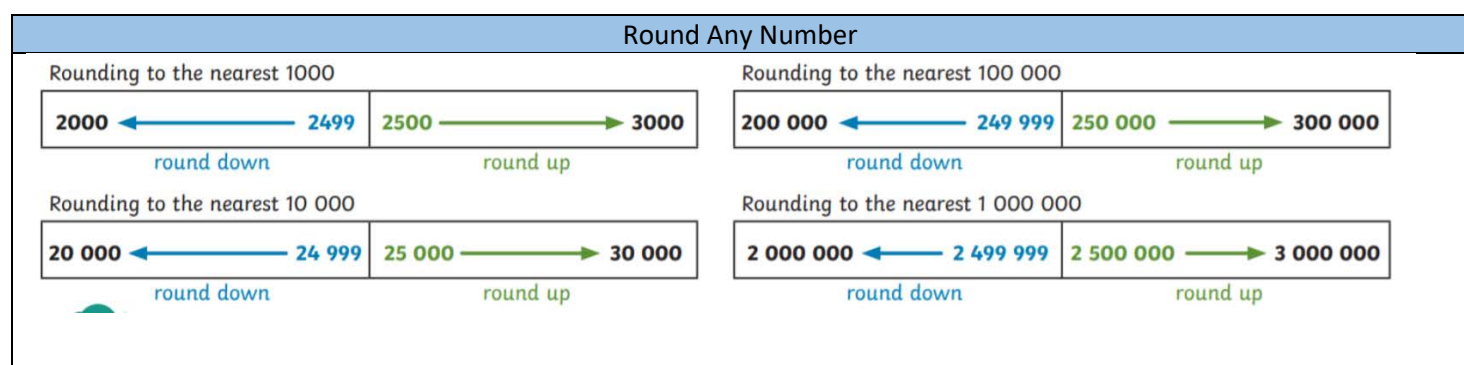
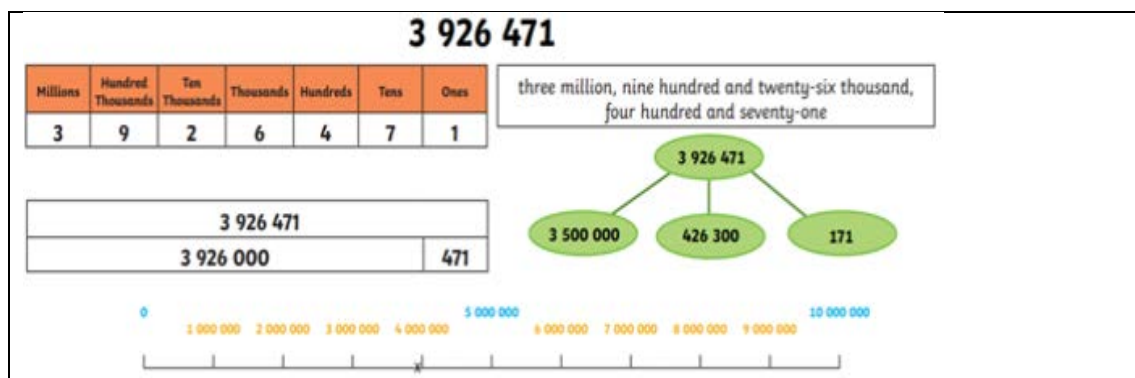
ten million	millions
thousands	hundreds
tens	ones
zero	place value
greater than	less than
round	order
rounded	interval
negative number	digit
partition	linear sequence
sequence	place holder

Compare and Order

equals	greater than	less than				
$26 + 38 = 8 \times 8$	$223\ 873 > 98\ 256$	$901\ 198 < 1\ 091\ 098$				
Both calculations have the value 64.	The number on the left has 2 hundred thousands and the number on the right has 0 hundred thousands.	The number on the right has 1 million and the number on the left has 0 millions.				
smallest	81 782	127 352	127 835	137 019	200 002	greatest

Numbers to Ten Million

Millions			Thousands			Units		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones



What can my child do at home?

Practise all times tables with a focus on:

- 6 times tables
- 8 times tables
- 9 times tables
- 12 times tables

Practise prime numbers, square numbers, even numbers and odd numbers.

Children should regularly practise reading the time on an analogue clock and 24-hour digital clock.

Take ownership for areas which they find difficult and use Mathletics to help revise.

Children should practise reading large numbers, paying particular attention to the value of each digit.