YEAR 6 – Spring Term Knowledge Organiser

Topics Covered: Multiplying, dividing, adding and subtracting fractions, negative numbers in context, greater than, less than and equals signs, rounding decimal numbers, problem solving and reasoning, multiplying and dividing by 10, 100 and 1000, equivalent fractions, decimals and percentages, four number operations, volume, BIDMAS

Rounding:

Underline the place you are rounding to. We'll use to the nearest tenth (1 decimal place) as an example – 543.37

If the number to the right is five to nine, the underlined number needs to climb the vine – 543.4
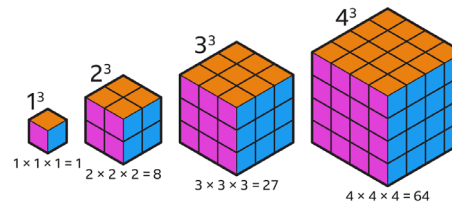
If the number to the right is zero to four, the underlined number needs to stay on the floor.

For calculations with more than one operation, use the following…

B	Brackets
I	Indices
D	Division
M	Multiplication
A	Addition
S	Subtraction

To calculate the volume of cubes and cuboids:

Length (L) x width (W) x height (H)

1^3
$1 \times 1 \times 1 = 1$

2^3
$2 \times 2 \times 2 = 8$

3^3
$3 \times 3 \times 3 = 27$

4^3
$4 \times 4 \times 4 = 64$

Multiplying and Dividing by 10, 100 and 1000

10 000	1000	100	10	1	•	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
					•			

Multiplying

X 10	digits move LEFT 1 space
X 100	digits move LEFT 2 spaces
X 1000	digits move LEFT 3 spaces

⟵

Dividing

÷ 10	digits move RIGHT 1 space
÷ 100	digits move RIGHT 2 spaces
÷ 1000	digits move RIGHT 3 spaces

⟶

Key Vocabulary

Numerator – The top number in a fraction which shows how many parts we have.
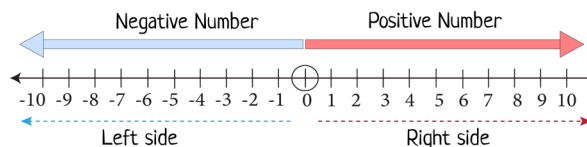
Denominator – The bottom number in a fraction which shows the total equal parts the item is split into.

Mixed Number – A mixed number is a whole number and a proper fraction combined.

Improper Fraction – A fraction where the top number (numerator) is bigger than the bottom number (denominator).

Place Value

Millions			Thousands			Ones			Decimals		
Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
7	8	9	1	2	3	4	5	6	.7	8	9

Negative Number ⟵ | ⟶ Positive Number

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Left side | Right side

Equivalent Fractions, decimals and percentages:

$\frac{0}{10}$	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$	$\frac{9}{10}$	$\frac{10}{10}$
0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1