

Aston and Cote Primary School – Knowledge Organiser 2025/2026

Subject: Maths

Year 5

Term 1

Read and write whole numbers up to one million

Place value is the number system that we use to describe the position of each digit within a number.

Whole numbers are numbers that do not include fractions and decimals.

Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones
M	HTh	TTh	T	H	T	O
3	2	2	1	3	1	2

Three million, two hundred and twenty-one thousand, three hundred and twelve

M	HTh	TTh	Th	H	T	O
●●●●	●●	●●	●	●●●	●	●●

Roll a dice 7 times and make the largest and smallest number possible.

We can also use partitioning to help us read and write numbers.

HTh	TTh	T	H	T	O
4	5	2	4	1	1
400 000	50 000	2 000	400	10	1

$452\ 411 = 400\ 000 + 50\ 000 + 2000 + 400 + 10 + 1$

452 411 = four hundred and fifty-two thousand, four hundred and eleven

Can you partition the numbers you made from the previous challenge?

Ordering whole numbers

Let's look at an example with 4 digit numbers.

Put these numbers in ascending order: 4521, 2451, 5124, 2154, 5214 (ascending means from smallest to largest)

T	H	T	O
4	5	2	1
2	4	5	1
5	1	2	4
2	1	5	4
5	2	1	4

Let's look at the thousands column. There are two numbers with 2 thousands: 2451 and 2154. We now need to look at the hundreds column. We can see that 2451 has 4 hundreds but 2154 has only 1 hundred so it is smaller. The next smallest number is 4521. We then have 2 numbers with 5 in the thousands column. 5124 and 5214. We can see that 5214 is larger as it has 2 hundreds. So, our numbers in ascending order are **2154, 2451, 4521, 5124, 5214**.

Multiplying and dividing by 10, 100 and 1000

When you multiply by 10 the original number gets 10 times bigger.

Hundreds	Tens	Ones
		9
	9	0

$9 \times 10 = 90$
The 9 moves one place value column to the left

Thousands	Hundreds	Tens	Ones
	7	2	5
7	2	5	0

$725 \times 10 = 7250$
All digits move one place value column to the left

When we multiply by 10, each digit moves one place to the left: The Ones digit moves to the Tens column, Tens moves to the Hundreds column etc. The space in the column is filled with a 0, which is called a **place holder**.

Multiplying by 100

When we multiply by **100**, each digit moves **two places** to the left and the spaces in the columns are filled with a 0, the **place holder**.

Thousands	Hundreds	Tens	Ones
		2	5
2	5	0	0

$25 \times 100 = 2,500$

Multiplying by 1000

When we multiply by **1,000**, each digit moves **three places** to the left and the spaces in the columns are filled with a 0, the **place holder**

75 x 1000 = 75,000					
HTh	TTh	Th	H	T	Ø
				7	5
	7	5	0	0	0

When you divide by 10 the original number gets 10 times smaller.

Hundreds	Tens	Ones
	9	0
		9

$90 \div 10 = 9$
The 9 moves one place value column to the right

H	T	Ø	.	1/10
	7	2	.	
		7		2

$72 \div 10 = 7.2$
All digits move one place value column to the right

When we divide by 10, we are making the number smaller so each digit moves 1 place to the right. Thousands move to the hundreds column, hundreds move to the tens column, tens move to the Ones column, Ones move to the tenths column. THE DECIMAL POINT DOES NOT MOVE.

Dividing by 100						Dividing by 1000								
When we divide by 100 , each digit moves two places to the RIGHT						When we divide by 1,000 , each digit moves three places to the RIGHT								
$65 \div 100 =$						$75 \div 1000 = 75,000$								
H	T	Ø	.	1/10	1/100	TTh	Th	H	T	Ø	.	1/10	1/100	1/100
	6	5	.						7	5	.			
		0	.	6	5					0	.	0	7	5