

# Knowledge Organiser - Maths

## Multiplication and division

### Multiply and dividing by 10, 100 and 1,000

When a number is multiplied by 10, 100 or 1,000, the digits move to the left in the place value column. The digits move **1 place left** when we multiply by 10, **2 places** to multiply by 100 and **3 places** to multiply by 1,000.

The empty place value spaces are filled with a **0 as a place holder**.

When a number is divided by 10, 100 or 1,000, the digits move to the right in the place value column: **1 place** when dividing by 10, **2 places** to divide by 100 and **3 places** to divide by 1,000.

Look what happens when we divide 7,900 by 10, 100 and 1,000:

TH	H	T	O
	4	2	3
	100 100 100	10 10	1 1 1
100 100 100	10 10	1 1 1	0

x10

$$423 \times 10 = 4,230$$

TH	H	T	O	.	t
7	9	0	0		
	7	9	0		
		7	9		

÷10  
÷100

### Long Multiplication

$$2543 \times 67 = 170381$$

		2	5	4	3
	x			6	7
		1	7	8	0
		1	3	3	2
		1	5	2	5
		1	3	2	1
		1	7	0	3
		1	7	0	3

Before multiplying by the number in the tens column, remember to use zero as a placeholder because the 6 in 67 is 6 tens (60).

### Division

$$136 \div 4 = 34$$

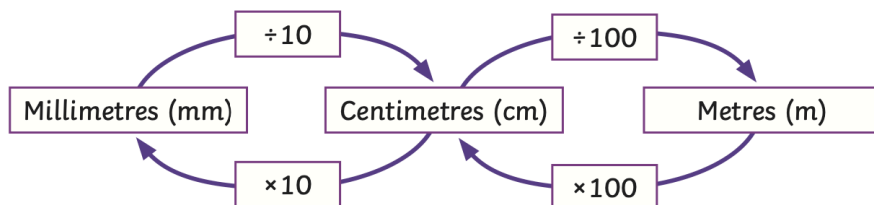
4	1	3	6
-	1	2	0
		1	6
		-	1
			6
			0

→ 30 × 4  
→ 4 × 4

### Equivalent Length

$$100 \text{ centimetres} = 1 \text{ metre}$$

$$10 \text{ millimetres} = 1 \text{ centimetre}$$



317cm	
300cm	17cm
3m	17cm
3m 17cm	

## Length and perimeter

### Key Vocabulary

metre (m)

centimetre (cm)

millimetre (mm)

height

length

width

perimeter

further/furthest

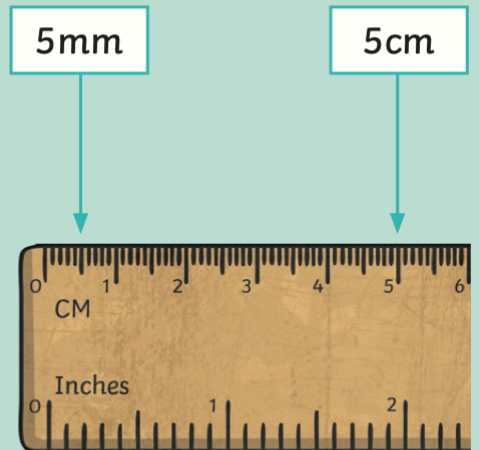
higher/highest

longer/longest

shorter/shortest

taller/tallest

### Measure Length



$$10\text{mm} = 1\text{cm}$$

### Perimeter

