

# Multiplication and Division, Length and Perimeter

## Lesson sequence

Multiples of 10, Related calculations, reasoning about multiplication, multiply 2 x 1 digits with exchanging, link multiplication and division, divide 2 x 1 digit with exchange, flexible partitioning and with remainders.

Measure in metres, centimetres and millimetres, equivalent lengths, compare lengths, add lengths, subtract lengths, measure and calculate perimeter.

## Vocabulary revision

- *Hundreds*
- *Tens*
- *Division*
- *Digit*
- *Multiple*
- *Pattern*
- *Partition*
- *Inverse*
- *Arrays*
- *Exchange*
- *Columns*
- *Commutative*
- *Partition*
- *Estimate*
- *Compliments*

## Sticky learning

### New Knowledge

- *To recall multiplication and division facts for the 3, 4 and 8 multiplication tables*
- *To know that the 2, 4 and 8 times tables are connected through doubling*
- *To know that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10.*
- *To know that perimeter is the measurement of the outside of a shape*
- *To know that we use m/cm/mm to measure length*
- *To know that we use kg/g to measure mass*
- *To know that we use l/ml to measure capacity.*

### New Skills

- *To use multiplication and division facts for the 3, 4 and 8 multiplication tables*
- *To write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods*
- *To solve problems, including missing number problems, involving multiplication and division.*
- *To measure the perimeter of simple 2-D shapes.*

## New vocabulary I will learn

- *Perimeter*
- *Metre*
- *Centimetre*
- *Millimetres*
- *Calculate*
- *Remainders*
- *Exchange*
- *Equivalent*

## Pictorial representations

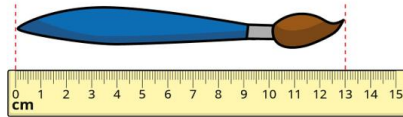
|    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|-----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30  |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40  |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50  |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60  |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70  |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80  |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90  |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

b)

| Tens | Ones |
|------|------|
|      |      |
|      |      |
|      |      |
|      |      |

×  =   
 ×  =   
 +  =   
 35 × 4 =

How long is the paintbrush?



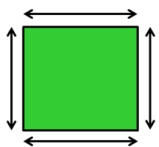
The paintbrush is  cm long.

b)

×  =        ÷  =   
 ×  =        ÷  =

## What is Perimeter?

The perimeter is the distance all the way around the outside of a 2D shape.



### Measurement

**Length** How long?

**Height** How tall?

**Capacity** How much?

**Weight** How heavy?

## Concept Links/Prior Knowledge

- To recall multiplication and division facts for the two, five and ten multiplication tables, including recognising odd and even numbers
- To know that multiplication of two numbers can be done in any order (commutative)
- To know the multiplication (×) and division (÷) signs
- To know that multiplication and division are the inverse of each other (for example,  $4 \times 5 = 20$  and  $20 \div 5 = 4$ )
- To choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- To choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- To choose and use appropriate standard units to estimate and measure temperature (°C) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- To choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.