

### In this unit we will ...

- Solve addition and multiplication problems
- Solve multi-step problems
- Use formal method for multiplication
- Use formal method to solve problems
- Use commutative to multiply more than two numbers
- Recognise and use factor pairs
- Use formal method for division
- Divide including remainders
- Solve division problems

### How does this unit build on prior learning?

This unit expands learning from Year 3, where children developed confidence in knowing when to multiply and an understanding of the difference between equal grouping and sharing. This unit also builds on what children learnt in Year 3 about remainders and on work in Year 4 Unit 5, where children learnt their multiplication facts up to  $12 \times 12$ .

### Multiply Using Formal Written Methods

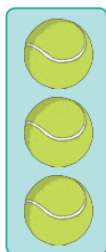
Th	H	T	O		Th	H	T	O
5	4	3			5	4	3	
×		4			×		4	
	1	2		( $4 \times 3$ )			4	
1	6	0		( $4 \times 40$ )	2	1	7	2
2	0	0	0	( $4 \times 500$ )		1	1	
2	1	7	2					

Remember to move any regrouped numbers into the next column. After the next multiplication, add the regrouped number to the answer.

### Short Division with Exact Answers

$$69 \div 3 = 23$$

$$3 \overline{) 69} \begin{array}{l} 23 \end{array}$$



69		
23	23	23

## Year 4 – Multiplication and Division

### National Curriculum Link – Year 4

- Solve problems involving multiplication and addition, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.
- Multiply two-digit and three-digit numbers by a one-digit number using a formal written layout.
- Recognise and use factor pairs and commutativity in mental calculations.
- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.

### Factor pairs and Commutativity

20

$5 \times 4 = 20$

$4 \times 5 = 20$

The factors of 20 are 1, 2, 4, 5, 10 and 20.

The factor pairs are:

1 and 20    2 and 10    4 and 5

We will need some maths words. Are any of these new?

### Key Vocabulary

Key Vocabulary	
multiply (x)	to add equal groups
divide (÷)	to break the number into equal parts
times tables	multiplication tables
partition	separate number into place value parts
array	a pictorial representation of times tables
bar model	diagram of rectangular bars to represent values
part-whole model	shows the relationship between the whole number and its parts
remainder	amount left over when a number cannot be divided exactly
factor pair	two numbers that multiply together to reach a product
factors	a number that divides another number exactly
commutative	calculations can be carried out in any order