Year 5

Power Maths Book B

Knowledge organisers

Units 7 - 11

Unit 7
Multiplication and division 2

In this unit we will ...

- Multiply a number up to 4 digits by a 1- or 2-digit number
- Divide a number up to 4 digits by a 1-digit number
- Interpret remainders
- Solve problems involving multiplication, division and remainders

We will need some maths words. Do you know what they all mean?

multiply **divide** **add** **subtract**
place value **partition**
equal **factor** **multiple**
remainder **sum** **total**

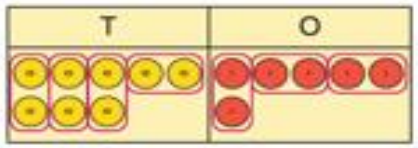
How can you use the grid method to work out 17 × 4?

	17	
	10	7
4	10 × 4 = 40	7 × 4 = 28

	T	O
	4	0
+	2	8
	6	8

We also need to be able to use the short division method.

$$2\overline{)86}\quad 43$$



Unit 8
Fractions 1

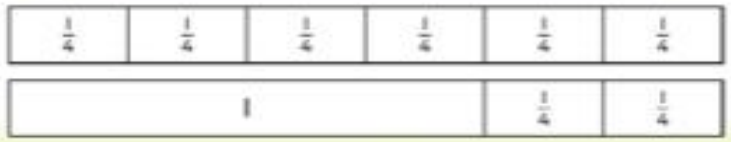
In this unit we will ...

- Find and use equivalent fractions
- Convert between improper fractions and mixed numbers
- Compare and order fractions
- Understand fractions as division
- Use fractions to show remainders

We will need some maths words. Do you know what they all mean? Can you identify and explain the ones you already recognise?

equivalent **numerator** **denominator**
whole **fraction** **simplify** **expand**
division **improper** **mixed number**
convert **sequence** **order**
greater than (>) **less than (<)** **equal to (=)**

Do you remember what this model is called? We will use it to represent mixed numbers and improper fractions. Can you tell which is which?



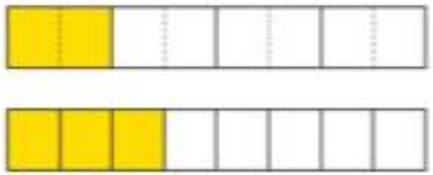
We will need to represent different fractions. What fractions are shown here?

Unit 9
Fractions 2

In this unit we will ...

- Add and subtract fractions with the same denominator
- Add and subtract fractions, including mixed numbers, where one denominator is a multiple of the other
- Solve word problems involving fractions

How can you add these two fractions?



$\frac{1}{4} + \frac{3}{8}$

We will need some maths words.
Do you know what they all mean?

add **subtract** **proper fraction**
improper fraction **convert** **simplify**
equivalent fraction **mixed number**
denominator **numerator**
whole **efficient** **common denominator**

We need to be able to convert between mixed numbers and improper fractions.
Use your skills to convert $2\frac{1}{3}$ into an improper fraction.

Unit 10
Fractions 3

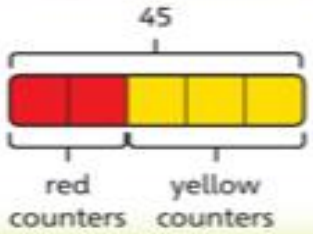
In this unit we will ...

- Multiply proper fractions and mixed numbers by whole numbers
- Find a fraction of an amount
- Understand how fractions can be operators
- Solve word problems involving fractions

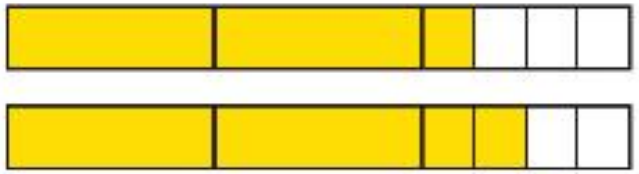
We will need some maths words. Do you know what all of these words mean?

multiply **proper fraction**
improper fraction **mixed number**
whole(s) **equal parts** **divide**
fraction of an amount **operator**
numerator **denominator** **convert**

How can you work out what each part is worth? How many yellow counters are there?



We will also need to represent fractions and mixed numbers using fraction strips. Use this model to work out $2\frac{1}{4} + 2\frac{2}{4}$.



Unit 11
Decimals and percentages

In this unit we will ...

- Read and write decimals up to three decimal places, including numbers greater than 1
- Round decimals to nearest whole number and to one decimal place
- Order and compare decimal numbers up to three decimal places
- Write percentages as fractions and as decimals.

We will need some maths words. Do you know what they all mean?

decimal **decimal place** **tenths**
hundredths **thousandths** **decimal point**
place value **digits** **fractions**
per cent (%) **percentages**

Do you remember what this is called? We use it to understand the place value of digits in a number.

How would you place 0·034 into the grid?

O	•	Tth	Hth	Thths
	•			

We need to use the number line too. Use it to help you show equivalent fractions, decimals and percentages.