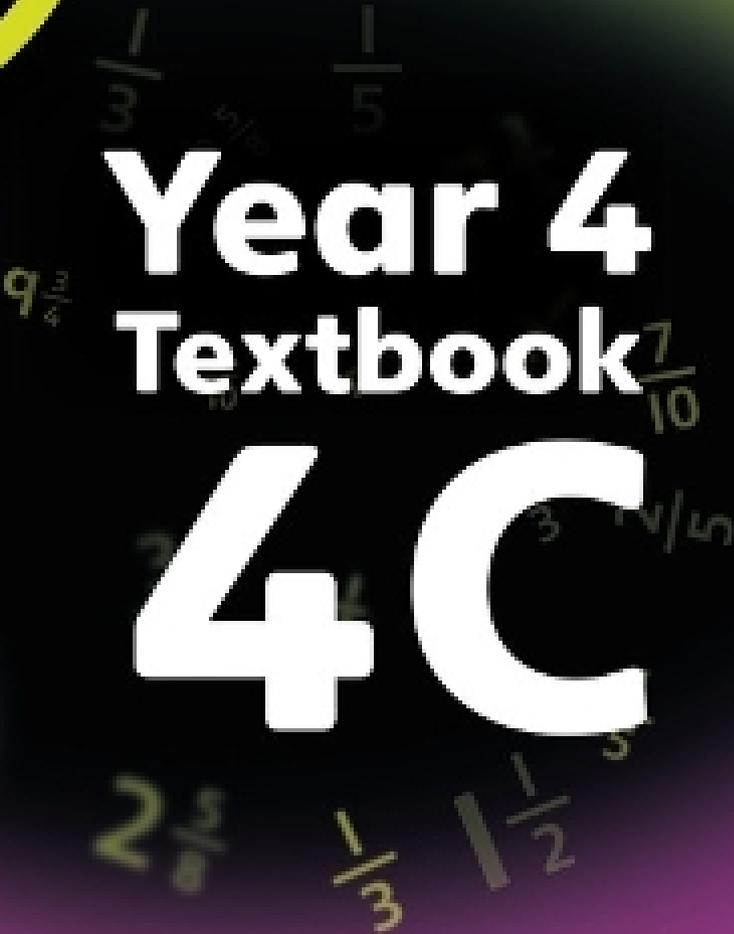


White Rose
MATHS

White Rose Maths Edition



Year 4 Textbook 4C

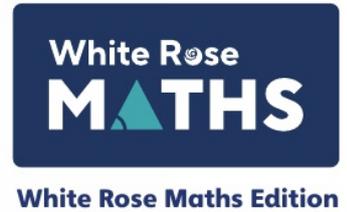


Pearson

Series Editor: Tony Stanoff



Year 4 Textbook 4C



Ash

Ash is curious.
He likes to help if you get stuck.

helpful



Sparks

flexible



Flo

brave



Astrid

determined



Dexter

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Order decimals
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Compare amounts of money
Estimate with money
Calculate with money
Solve problems with money
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Hours, minutes and seconds
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Are you ready
for some
more maths?



How to use this book

These pages make sure we're ready for the unit ahead. Find out what we'll be learning and brush up on your skills.



Unit 14
Geometry – angles and 2D shapes

In this unit we will ...

- ✦ Learn to recognise obtuse, acute and right angles
- ✦ Understand regular and irregular shapes
- ✦ Name and describe quadrilaterals and triangles
- ✦ Identify lines of symmetry in shapes and patterns

Do you remember quarter turns and half turns?

We will need some maths words. Do you recognise any of these words?

quadrilateral, triangle, regular, irregular, interior angle, angle, acute, obtuse, polygon, right angle, symmetric, isosceles, scalene, equilateral, line of symmetry, reflective symmetry

Can you identify the right angle? Describe it to a partner.

Discover

Lessons start with **Discover**.

Here, we explore new maths problems.

Can you work out how to find the answer?

Don't be afraid to make mistakes. Learn from them and try again!

Unit 14: Geometry – angles and 2D shapes, Lesson 1

Identify angles

Discover

Hedges

Bench

1 a) In which corners (a, b or c) of the garden can the bench be placed?
b) Explain what is the same and what is different between angles a, b and c.

92



Share

Next, we share our ideas with the class.

Did we all solve the problems the same way?
What ideas can you try?

Share

a) Angle a is the same size as the angle of the corners of the bench, so it will fit neatly here.

Angle b is larger than the angle of the corners of the bench, so it can be placed here.

Angle c is smaller than the angle of the corners of the bench, so it cannot be placed here.

b) All of the angles measure the turn between two hedges of the garden.

Angle a is a quarter turn or a right angle.
Angle b is larger than a right angle.
Angle c is smaller than a right angle.

Acute is an angle less than a quarter turn. Obtuse is an angle greater than a quarter turn.

Think together

Then we have a go at some more problems together. Use what you have just learnt to help you.

We'll try a challenge too!



This tells you which page to go to in your **Practice Book**.

Think together

1) Which corners will the bench fit in?

2) a) Which of these angles are acute?
b) Which of these angles are obtuse?

c) One of the angles in a) or b) is a right-angle. Which one?

Remember, acute is the name for an angle less than a right angle. Obtuse is an angle greater than a right angle.

Challenge

3) a) To which numbers could the clock hand point to show:
i) an acute turn
ii) a right-angle turn
iii) an obtuse turn

b) Here is a kite.

Describe the angles in the kite.

At the end of each unit there's an **End of unit check**. This is our chance to show how much we have learnt.

End of unit check

1) Identify the irregular quadrilateral.

2) Which angle is obtuse?

3) Identify the isosceles triangle.

4) Identify the shape that has more than three obtuse angles.

5) Identify the shape with two lines of symmetry.

6) This square has been divided into four triangles A, B, C and D.

a) Which triangles have a right angle?
b) Which triangles have two equal sides?

Unit II

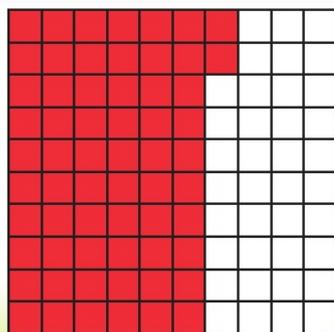
Decimals 2



In this unit we will ...

- ⚡ Work out what we need to make a whole
- ⚡ Write and partition decimals
- ⚡ Compare and order decimals
- ⚡ Round decimals to the nearest whole number
- ⚡ Learn the decimal equivalents of fractions such as $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$

In the last unit, we learnt how to show a decimal.
What decimal is shown here?





We will need some maths words.
How many of these can you remember?

tenths

hundredths

0.1 and 0.01

equivalent

whole number

round

greater than ($>$)

less than ($<$)

equal to ($=$)

order

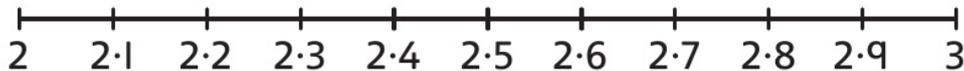
compare

decimal place

ascending

descending

We will also need to know where to find
a decimal on a number line. This will
help us round the number.



Make a whole

Discover

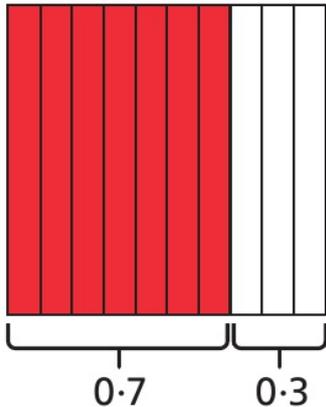


- I Jamie and Alex both want to make strawberry jam.
 - a) How many more kilograms of strawberries does Jamie need?
 - b) How many more kilograms of strawberries does Alex need?

Share

- a) 1 whole kilogram of strawberries is needed to make the jam.

The number 0.7 is made up of 7 tenths.



3 more tenths are needed to make 1 whole.

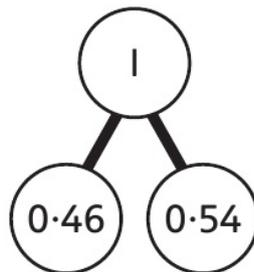
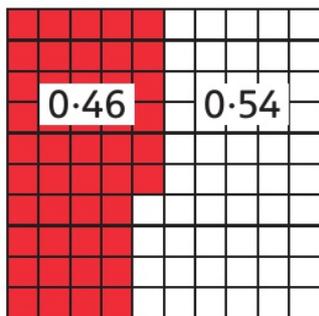
3 tenths = 0.3

Jamie needs another 0.3 kg of strawberries.

- b) The number 0.46 is made up of 46 hundredths.

Another 54 hundredths are needed to make 1 whole.

54 hundredths = 0.54



Alex needs another 0.54 kg of strawberries.

I used a diagram to help me. I know what $\frac{7}{10}$ looks like.



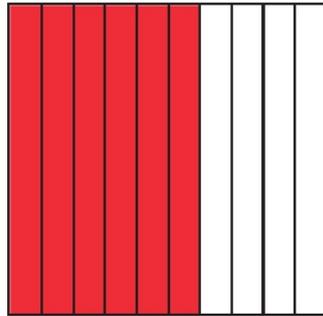
I did not count each hundredth needed to make a whole. I noticed that 46 and 54 are a number bond to 100.



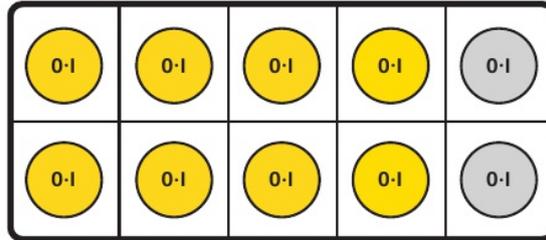
Think together

1 Use the models to complete the calculations.

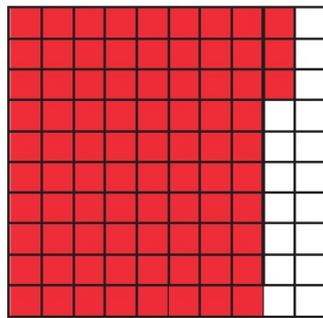
a) $0.6 + 0.\square = 1$



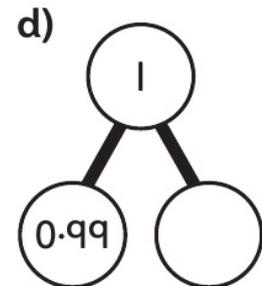
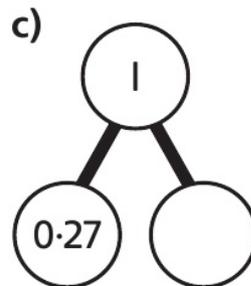
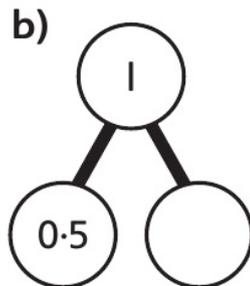
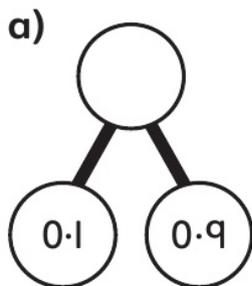
b) $0.8 + 0.\square = 1$



c) $0.83 + 0.\square\square = 1$



2 Complete the part-whole models.

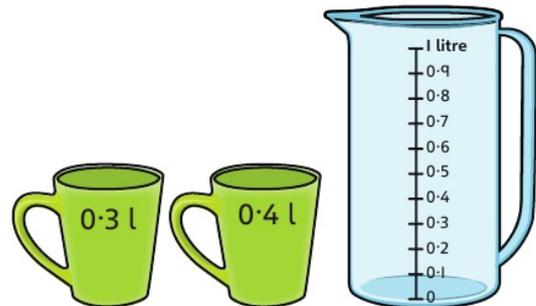


CHALLENGE

3 Jamilla, Luis and Andy want to fill a jug with 1 litre of water.

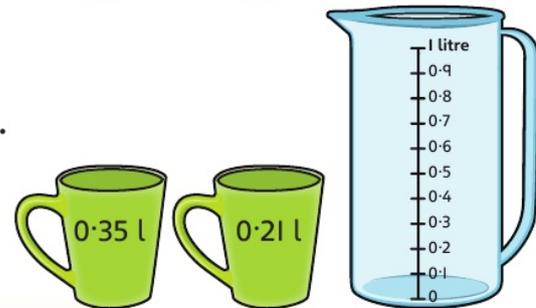
a) Jamilla has two cups with different amounts of water in each.

She pours the water into the jug. How much more water will she need to fill the jug?



b) Luis has two cups.

He pours the water into the jug. How much more water will Luis need to fill the jug?

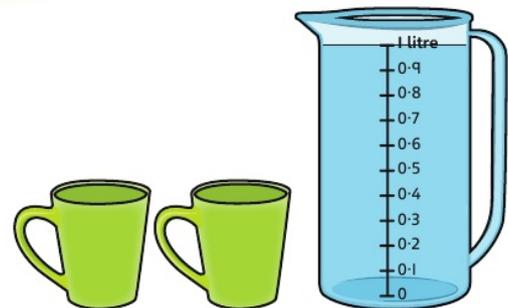


I will use a hundredths grid with different colours to represent the cups to help me.

c) Andy has already poured the water from two cups into his jug.

His jug is now full with 1 litre of water.

How much water could have been in each of his cups?



I wonder if I can find more than one answer.



Partition decimals

Discover

Make the number 2.37.

| T | O | Tth | Hth |
|---|-----|-------|------------------|
| | ● ● | ● ● ● | ● ● ● ● ● ● ● |

Mr Jones

Lexi

- 1 a) What mistake has Lexi made?
- b) Partition 2.37 using a part-whole model.
Write this as an addition.

Share

a) Lexi's answer shows 2 ones and 3 tenths, so this is correct.



I looked carefully at each digit in the decimal number.

Remember, the first digit after a decimal point shows tenths. The second digit after a decimal point shows hundredths.

Lexi's hundredths column only has 6 hundredths.

| T | O | Tth | Hth |
|---|-----|-------|---------------|
| | ● ● | ● ● ● | ● ● ● ● ● ● ● |
| | 2 | 3 | 6 |

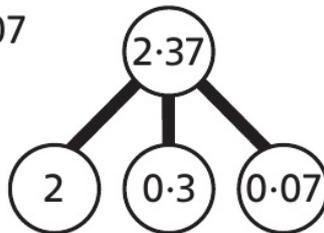


2.37 has 7 hundredths, so this is Lexi's mistake.

This is the correct place value grid.

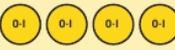
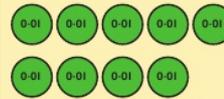
| T | O | Tth | Hth |
|---|-----|-------|-----------------|
| | ● ● | ● ● ● | ● ● ● ● ● ● ● ● |
| | 2 | 3 | 7 |

b) $2.37 = 2 + 0.3 + 0.07$



Think together

1 Work out the missing numbers.

| T | O | Tth | Hth |
|---|---|---|--|
| |  |  |  |

a) 5.49 is equal to ones, tenths and hundredths.

$$5.49 = 5 + 0.\text{} + 0.0\text{}$$

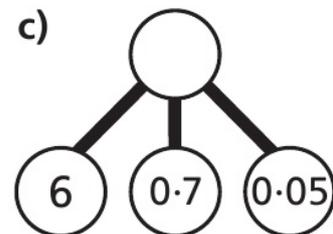
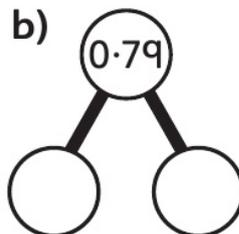
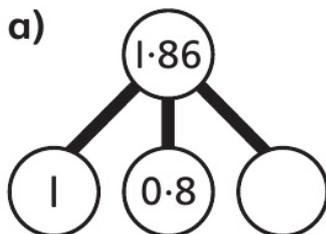
b) Make the number 0.26 on a place value grid.

| O | Tth | Hth |
|---|-----|-----|
| | | |

0.26 is equal to ones tenths and hundredths.

$$0.26 = \text{} + \text{}$$

2 Complete the part-whole models.



CHALLENGE

- 3 Ebo has used five counters to make the number 20.12.

| T | O | Tth | Hth |
|-----|---|-----|-----|
| ● ● | | ● | ● ● |

How many different numbers can you make using the same place value grid and five counters?

| T | O | Tth | Hth |
|---|---|-----|-----|
| | | | |



I will draw a part-whole model for each number.



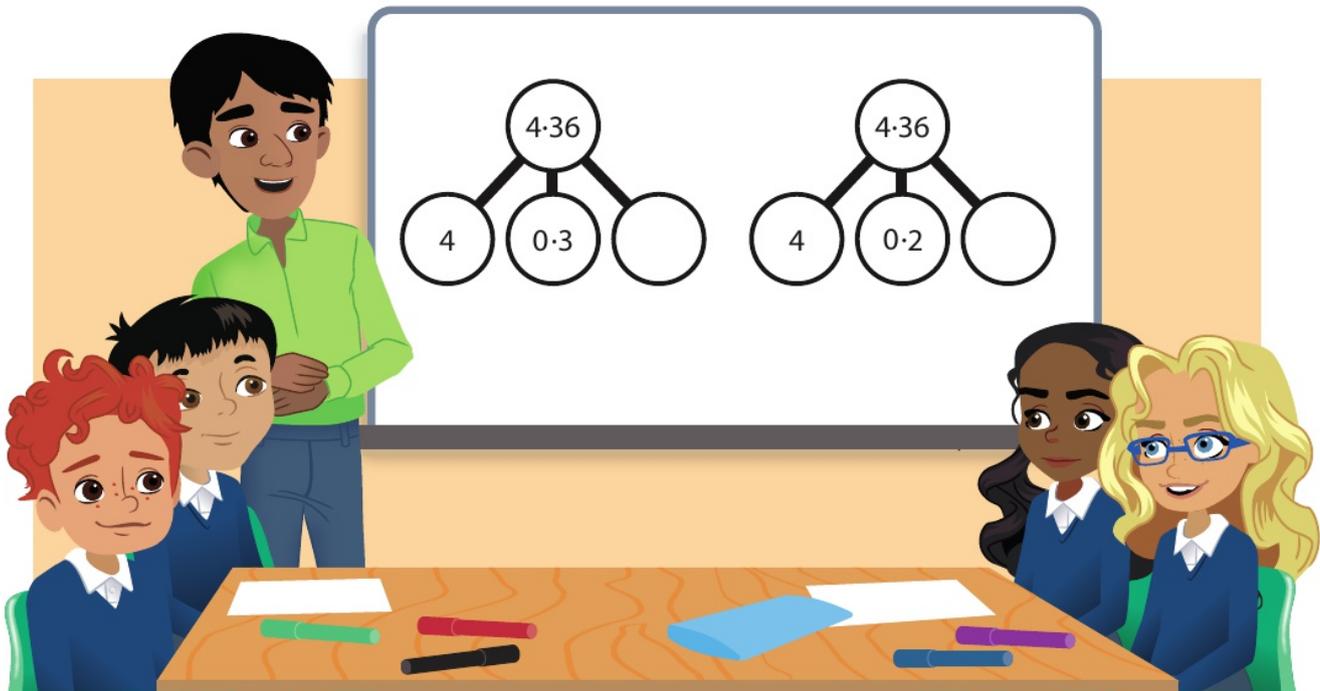
I wonder how many numbers will have just one **decimal place**.

One decimal place means just one digit after the decimal point.



Flexibly partition decimals

Discover



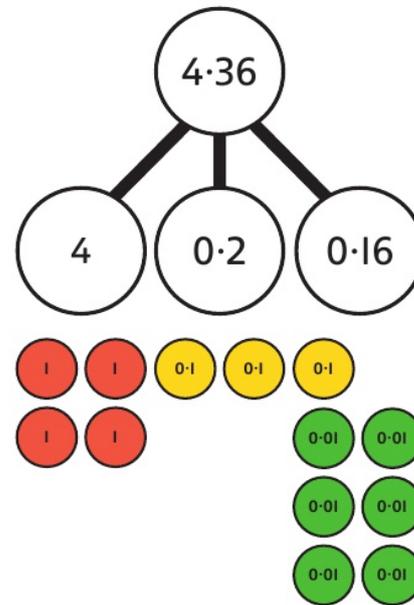
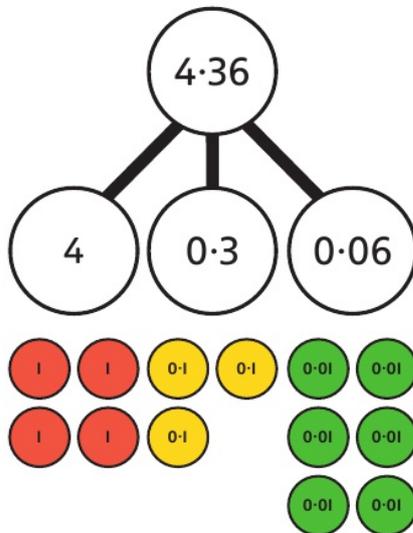
- I** a) Make the number 4.36 from place value counters.
- b) Complete the part-whole models.

Share

a) 4.36 is 4 ones, 3 tenths and 6 hundredths.

| T | O | Tth | Hth |
|---|---|---|--|
| |  |  |  |
| | 4 | 3 | 6 |

b)



I lined the place value counters up underneath the parts and worked out what I had left.

