Lesson 1 - PUMA TEST

Lesson 2 WALT explore decimals as fractions

Lesson 3 WALT calculate decimals as fractions

Lesson 4 WALT explore thousandths as decimals.

Lesson 5 WALT reasoning/ problem solve

WEEK 11 - MATHS

R.G. **Rapid Grasper**
Shows where our GD can start.

Marking Priority
Best work to indepth mark

Lesson 1

Puma test

Lesson 2

WALT explore decimals as fractions

Lets talk through the key vocabulary for the next few weeks

Vocabulary

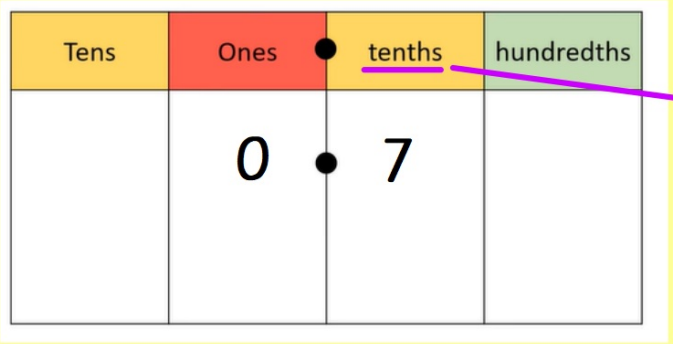
decimals
place value
tenth
hundredth
whole number
equivalent
partitioning
rounding

WALT explore decimals as fractions

Decimals and fractions are two different ways to show the same number.

Write 0.7 as a fraction

0.7 as a decimal



0.7 as a fraction

$$\frac{7}{10}$$ = seven tenths

Look at the language used it is the same

I DO

WALT explore decimals as fractions

Decimals and fractions are two different ways to show the same number.

Can you write these numbers in decimals or fractions:

1) 0.8
2) 0.7
3) 0.4
4) $\frac{6}{10}$
5) $\frac{1}{10}$

YOU DO

WALT explore decimals as fractions

Decimals and fractions are two different ways to show the same number.

Write 0.79 as a fraction

0.79 as a decimal

Tens	Ones	tenths	hundredths
	0 .	7	9

0.79 as a fraction

$$\frac{79}{100}$$ = seventy nine hundreths

I DO

WALT explore decimals as fractions

Decimals and fractions are two different ways to show the same number.

Can you write these numbers in decimals or fractions:

1) 0.57
2) 0.33
3) 0.09
4) $\frac{85}{100}$
5) $\frac{65}{100}$

YOU DO

WALT explore decimals as fractions

Decimals and fractions are two different ways to show the same number.

Write 5.79 as a fraction

5.79 as a decimal

Tens	Ones	tenths	hundredths
	5 .	7	9

5.79 as a fraction

$$5\frac{79}{100}$$

= five and seventy nine hundreths

What is different here?

I DO

WALT explore decimals as fractions

Decimals and fractions are two different ways to show the same number.

Can you write these numbers in decimals or fractions:

1) 9.17
2) 8.63
3) 3.05
4) $8\frac{95}{100}$
5) $2\frac{47}{100}$

YOU DO

WALT Calculate fractions of a quanitiy

Pick a set based on your understanding so far:

Set A

Write as a fraction:

1. 0.1
2. 0.3
3. 0.5
4. 0.9
5. 0.89
6. 0.77
7. 0.03

Find the missing numbers to complete these calculations:

8. $0.89 = 0.8 + \frac{\square}{100}$
9. $0.62 = \frac{\square}{10} + 0.02$
10. $0.21 = \frac{\square}{10} + \frac{1}{100}$
11. $0.47 = \frac{4}{10} + \frac{\square}{100}$
12. $0.69 = \frac{\square}{10} + \frac{\square}{100}$

Find the missing numbers to complete these mixed numbers:

13. $4.2 = 4\frac{\square}{10}$
14. $6.7 = \square\frac{7}{10}$
15. $9.3 = \square\frac{\square}{10}$
16. $1.89 = \square\frac{\square}{100}$
17. $3.13 = \square\frac{\square}{100}$

Set B

Write as a fraction:

1. 0.6
2. 0.2
3. 0.19
4. 0.41
5. 0.99
6. 0.07
7. 0.04

Write as mixed numbers:

8. 4.3
9. 5.7
10. 9.84
11. 15.15
12. 32.41
13. 3.05
14. 100.09

Find the missing numbers:

15. $3.89 = 3.8 + \frac{\square}{100}$
16. $2.43 = 2 + \frac{\square}{100}$
17. There are 0.23 g of salt in a glass of milk. Write this amount as a fraction.
18. Mike's thumb is 6.35 cm long. Write this as a mixed number.

If you get 5 questions in a row correct in sets A & B then move onto the next one.

If you still don't understand then stay with me.

Set C

Write as mixed numbers:

1. 8.1
2. 1.31
3. 8.83
4. 13.17
5. 38.47
6. 55.29
7. 209.03

Find the missing numbers to complete these calculations:

8. $1.17 = 1 + \frac{\square}{100}$
9. $4.43 = 4.03 + \frac{\square}{10}$
10. $7.89 = 7.5 + \frac{\square}{100}$
11. $10.75 = 10 + \frac{3}{10} + \frac{\square}{100}$
12. $15.29 = 15 + \frac{\square}{10} + \frac{19}{100}$

This table shows the weights of some items in Alia's pencil case.

Crayon	Ruler	Pen
5.74 g	23.45 g	54.08 g

13. Write the weight of each item as a mixed number.
14. Gabe's rope is 8.56 m long. He uses 8.1 m to make a swing. Write the amount he has left as a fraction.

Let's go through some more examples:

Decimals and fractions are two different ways to show the same number.

Can you write these numbers in decimals or fractions:

1) 0.5

2) 0.33

3) 4.99

4) $\frac{8}{10}$

5) $\frac{52}{100}$

6) $8\frac{38}{100}$

Now lets start on set a

Set A

Write as a fraction:

1. 0.1
2. 0.3
3. 0.5
4. 0.9
5. 0.89
6. 0.77
7. 0.03

Find the missing numbers to complete these calculations:

8. $0.89 = 0.8 + \frac{\square}{100}$
9. $0.62 = \frac{\square}{10} + 0.02$
10. $0.21 = \frac{\square}{10} + \frac{1}{100}$
11. $0.47 = \frac{4}{10} + \frac{\square}{100}$
12. $0.69 = \frac{\square}{10} + \frac{\square}{100}$

Find the missing numbers to complete these mixed numbers:

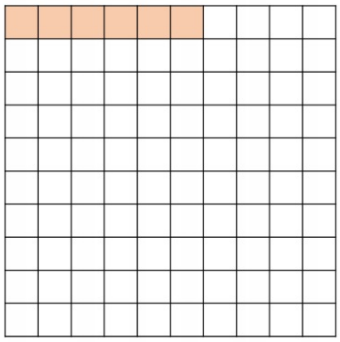
13. $4.2 = 4\frac{\square}{10}$
14. $6.7 = \square\frac{7}{10}$
15. $9.3 = \square\frac{\square}{10}$
16. $1.89 = \square\frac{\square}{100}$
17. $3.13 = \square\frac{\square}{100}$

WALT Calculate fractions of a quanitiy

Plenary

True or false?

The hundred grid shows 0.6 or $\frac{6}{10}$

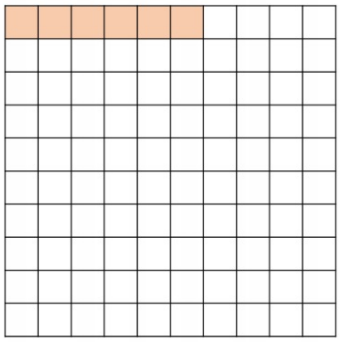


WALT Calculate fractions of a quanitiy

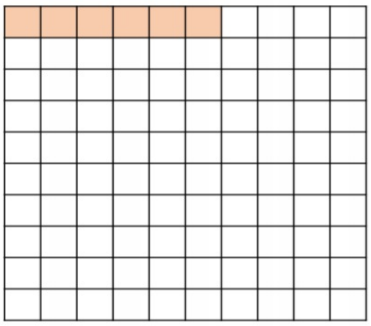
Plenary

True or false?

The hundred grid shows 0.6 or $\frac{6}{10}$



False



The hundred grid shows 0.06 or $\frac{6}{100}$

Lesson 3

WALT calculate decimals as fractions

Mega Challenge

Can you write these numbers in decimals or fractions:

0.56

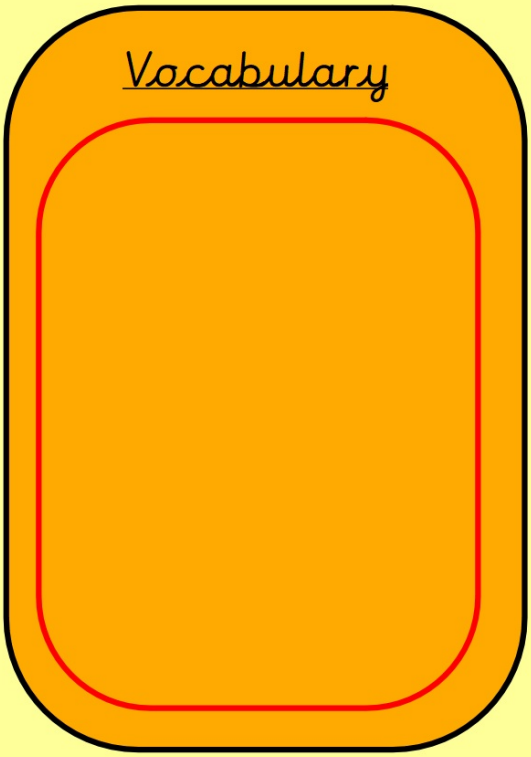
0.7

8.35

$\frac{8}{10}$

$\frac{45}{100}$

$2\frac{37}{100}$



How many key words
How many can
you name?

Lesson 3

WALT calculate decimals as fractions

Mega Challenge

Can you write these numbers in decimals or fractions:

0.56

0.7

8.35

$\frac{8}{10}$

$\frac{45}{100}$

$2\frac{37}{100}$

Vocabulary

decimals
place value
tenth
hundredth
whole number
equivalent
partitioning
rounding

How many key words
How many can
you name?

WALT calculate decimals as fractions

$0.56 = \frac{56}{100}$ $0.7 = \frac{7}{10}$ $8.35 = 8\frac{35}{100}$

$\frac{8}{10} = 0.8$ $\frac{45}{100} = 0.45$ $2\frac{37}{100} = 2.37$

If you correctly answered all of the mega challenge question, move on to the class questions.

If you did not answer all the mega challenge correctly, stay with me to learn more.

Class questions - see next slide!

REASON AND PEER MARK FOR EVERY QUESTION!

WALT calculate fractions of an amount

20 min

Set A

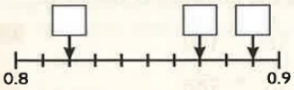
Write these as fractions:

1. 0.26
2. 0.69
3. 0.04
4. 0.912
5. 0.683
6. 0.709
7. 0.051

Find the missing numbers to complete these mixed numbers:

8. $3.21 = 3\frac{\square}{100}$
9. $8.41 = \square\frac{41}{100}$
10. $9.39 = \square\frac{\square}{100}$
11. $1.424 = 1\frac{\square}{1000}$
12. $5.103 = \square\frac{\square}{1000}$

13. Find the missing numbers on this number line. Give your answers as fractions.



14. The mass of a piece of gold is 0.877 g. Write this mass as a fraction.

Set B

Write these as fractions:

1. 0.53
2. 0.390
3. 0.341
4. 0.874
5. 0.903
6. 0.007
7. 0.091

Write as mixed numbers:

8. 5.51
9. 8.08
10. 1.743
11. 3.246
12. 17.147
13. 28.914
14. 45.008

Find the missing numbers to complete these calculations:

15. $1.89 = 1.8 + \frac{\square}{100}$
16. $2.893 = 2 + \frac{\square}{1000}$
17. $1.008 = 1 + \frac{\square}{1000}$
18. $5.627 = 5.62 + \frac{\square}{1000}$
19. $1.213 = 1.013 + \frac{\square}{10}$

Set C

Write as mixed numbers:

1. 1.07
2. 9.471
3. 5.609
4. 9.003
5. 15.209
6. 25.031
7. 10.047

Find the missing numbers to complete these calculations:

8. $8.814 = 8 + \frac{\square}{1000}$
9. $2.547 = 2.5 + \frac{\square}{1000}$
10. $5.176 = 5.006 + \frac{\square}{100}$
11. $6.059 = 6 + \frac{3}{100} + \frac{\square}{1000}$
12. $3.307 = 3 + \frac{2}{10} + \frac{\square}{1000}$

Dan and Lina have a 200 m race.
Lina finished 0.87 seconds after Da
Write this time as a fraction with:

13. a denominator of 100
14. a denominator of 1000

Dan finished in 25.873 seconds.

15. Write this as a mixed number.

16. A lump of coal weighs 9.042 g.
Write this as a mixed number.

If you get 5 questions in a row correct in sets A & B then move onto the next one.

We are going to work through some maths questions and focus on our reasoning.

You are going to choose two problems to solve and then reason for.

6 Complete the table.

Decimal	Decimal (expanded form)	Fraction	Fraction (expanded form)	In words
2.13	2 + 0.1 + 0.03	$2\frac{13}{100}$	$2+\frac{1}{10}+$	
4.37		$4\frac{\square}{100}$		
	5 + 0.6 + 0.02			

8 Use the digits 3, 4 and 5 to comple

$\square\ \square . 0 \square$

How many different numbers can you mak

8 Complete the part-whole models using fractions or decim

a) $\frac{50}{100}$ b) 0.4

Compare answers with a partner.

7 Write the decimals as fractions.
Give your answer as a mixed number.

$\square\frac{\square}{10}$

c) 13.08 = $\square\frac{\square}{100}$

$\square\frac{\square}{100}$

d) 3.98 = $\square\frac{\square}{100}$

n says he has coloured 0.6 of the hundred square.

istake that Huan has made.

6 Write <, > or = to complete the statements.

a) 0.4 ○ $\frac{40}{100}$

b) 0.02 ○ $\frac{20}{100}$

c) 0.6 ○ $\frac{6}{10}$

d) 0.5 ○ $\frac{5}{100}$

e) 0.88 ○ $\frac{88}{100}$

f) 0.88 ○ $\frac{89}{100}$

Amir has coloured part of a hundred square.

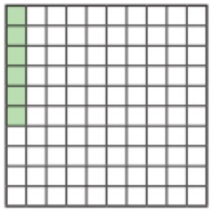
a) What fraction is represented by the coloured squares?

b) Write this fraction in a different way.

Remember to use the reasoning helpsheet if you need it

Lets complete one together.

5 Huan says he has coloured 0.6 of the hundred square.



Explain the mistake that Huan has made.

Plenary

Switch your books with your partner and check their reasoning.

Lesson 4

WALT understand thousandths

Who can spot the new keyword?

Vocabulary

decimals
decimal
fraction
tenth
hundredth
thousandth
ten times
place value
whole number
equivalent
partitioning
rounding

WALT understand thousandths

We have had two light bulb moments....

What were they?

Can you complete the sentence?

1 is ▢ times the size of ▢

WALT understand thousandths

We have had two light bulb moments....

What were they?

1000 is 10 times the size of 100

$\frac{1}{10}$ equal in value to 0.1

Can you complete the sentence?

1 is 10 times the size of 0.1

WALT understand thousandths

Challenge

Give the value of the underline figure in each number:

1. 3.4<u>2</u>
2. 1<u>5</u>.31
3. 31.17<u>9</u>
4. 6.0<u>5</u>
5. 48.12<u>7</u>

Mega Challenge

Increase the following numbers by $\frac{1}{1000}$

1. 1.98
2. 5
3. 2.436
4. 7.9
5. 6.095

WALT understand thousandths

Challenge

1. 3.4<u>2</u> - 2 hundreths
2. 1<u>5</u>.31 - 5 ones
3. 31.17<u>9</u> - 9 thousandths
4. 6.0<u>5</u> - 5 hundredths
5. 48.12<u>7</u> - 7 thousandths

Mega Challenge

1. 1.98 - 1.981
2. 5 - 5.001
3. 2.436 - 2.437
4. 7.9 - 7.901
5. 6.095 - 6.096

If you correctly answered <u>all</u> of the mega challenge question, move on to the class questions.

If you did not answer <u>all</u> the mega challenge correctly, stay with me to learn more.

Class questions - see next slide!

REASON AND PEER MARK FOR EVERY QUESTION!

WALT understand thousandths

Thousandths as decimals

1 Represent the numbers on a place value chart.
Write the decimal.

a) 5 ones, 7 tenths, 0 hundredths and 2 thousandths

b) 0 ones, 6 tenths, 2 hundredths and 9 thousandths

c) 7 ones, 0 tenths, 1 hundredth and 3 thousandths

d) 5 ones, 6 tenths, 7 hundredths and 0 thousandths

e) What would these numbers be as fractions?
Talk about it with a partner.

2 Write each number as a decimal.

a) $4\frac{514}{1000}$ **d)** $1\frac{50}{1000}$

b) $6\frac{325}{1000}$ **e)** $4\frac{5}{1000}$

c) $2\frac{250}{1000}$ **f)** $\frac{2}{1000}$

3 Mo is placing decimal numbers on a number line.
Draw an arrow from each number to its position on the number line.

0.532 | 0.535 | 0.538 | $\frac{539}{1000}$

0.53 — 0.54

4 What number is the arrow pointing to?
Write each number as a decimal and as a fraction.

a) 1.25 — 1.26

b) 3.04 — 3.05

c) 9.29 — 9.3

5 Complete the table to continue the pattern.

$\frac{57}{1000}$	$\frac{58}{1000}$	$\frac{\square}{1000}$	$\frac{\square}{1000}$				
0.057							

6 Write a decimal to complete the statement.

a) $\frac{7}{10} + \frac{3}{100} + \frac{9}{1000} = \square$

b) $\frac{9}{10} + \frac{7}{100} + \frac{1}{1000} = \square$

c) $\frac{7}{100} + \frac{9}{10} + \frac{1}{1000} = \square$

d) $\frac{2}{10} + \frac{7}{1000} = \square$

e) $\frac{6}{100} + \frac{3}{1000} = \square$

7 Eva has 12 plain counters.
She makes numbers using the place value chart.

1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

a) List five numbers that Eva could make.

b) What is the greatest and smallest number she can make with all 12 counters?

greatest ☐ smallest ☐

8 Whitney is representing 0.536

$\frac{50}{100} + \frac{18}{1000} + \frac{18}{1000}$

a) Is Whitney correct? _____
Explain your answer.

b) Partition Whitney's number another way.

Do it!
Reason it!
Peer Mark it!

WALT understand thousandths

Challenge

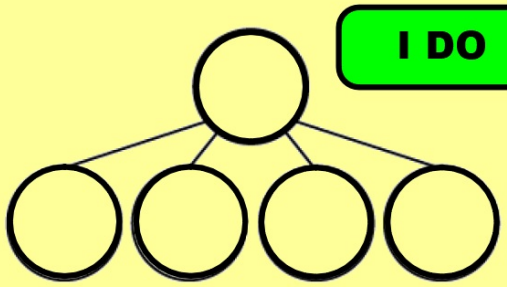
Give the value of the underline figure in each number:

1. 3.4<u>2</u>
2. 1<u>5</u>.31

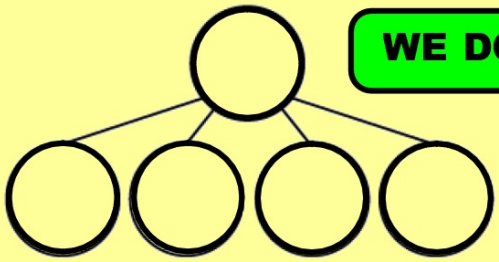
NOW TRY THESE:

3. 42.38
4. 12.078
5. 50.789

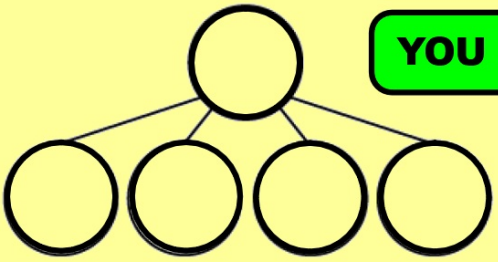
I DO



WE DO



YOU DO



Thousandths as decimals

1 Represent the numbers on a place value chart.
Write the decimal.

a) 5 ones, 7 tenths, 0 hundredths and 2 thousandths

5·702

b) 0 ones, 6 tenths, 2 hundredths and 9 thousandths

c) 7 ones, 0 tenths, 1 hundredth

d) 5 ones, 6 tenths, 7 hundredths

e) What would these numbers be
Talk about it with a partner.

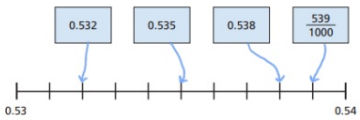
2 Write the mixed numbers as decim

a) $4\frac{514}{1000}$ = 4·514

b) $6\frac{325}{1000}$ = 6·325

c) $2\frac{250}{1000}$ = 2·25

3 Mo is placing decimal numbers on a number line.
Draw an arrow from each number to its position on the number line.



4 What number is the arrow pointing to?

5 Complete the table to continue the pattern.

$\frac{57}{1000}$	$\frac{58}{1000}$	$\frac{59}{1000}$	$\frac{60}{1000}$	$\frac{61}{1000}$	$\frac{62}{1000}$	$\frac{63}{1000}$	$\frac{64}{1000}$
0.057	0·058	0·059	0·06	0·061	0·062	0·063	0·064

6 Write a decimal to complete the statement.

a) $\frac{7}{10} + \frac{3}{100} + \frac{9}{1000}$ = 0·739

b) $\frac{9}{10} + \frac{7}{100} + \frac{1}{1000}$ = 0·971

c) $\frac{7}{100} + \frac{9}{10} + \frac{1}{1000}$ = 0·971

d) $\frac{2}{10} + \frac{7}{1000}$ = 0·207

e) $\frac{6}{100} + \frac{3}{1000}$ = 0·063

7 Eva has 12 plain counters.
She makes numbers using the place value chart.

1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

a) List five numbers that Eva could make.

various answers

b) What is the greatest and smallest number she can make with all 12 counters?

greatest 12 smallest 0·012

8 Whitney is representing 0.536

$\frac{50}{100} + \frac{18}{1000} + \frac{18}{1000}$

a) Is Whitney correct? yes

Explain your answer.

b) Partition Whitney's number another way.

e.g. $\frac{5}{10} + \frac{3}{100} + \frac{6}{1000}$

ANSWERS

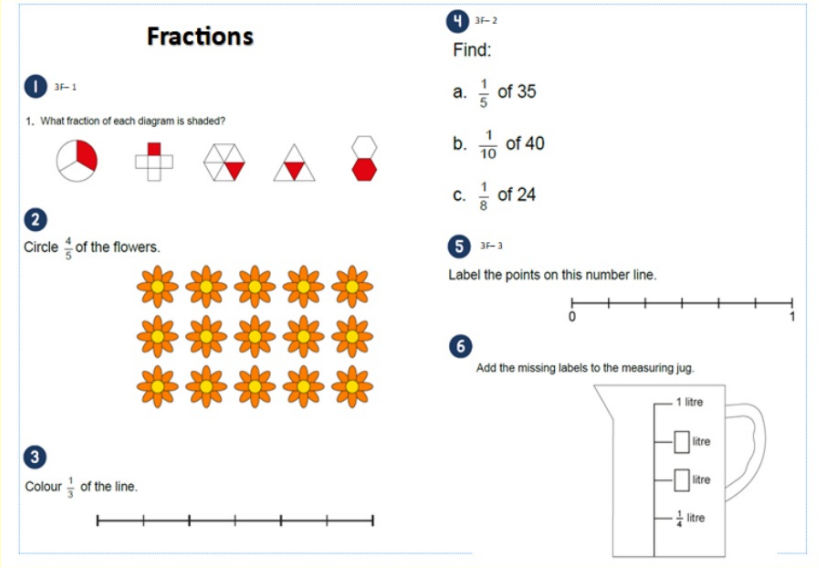
WALT understand thousandths

Think you know your place value ?

Lesson 4

WALT assess our fraction knowledge

We are
going to
do the fractions
quiz to see where
we have improved



Fractions

1 3F– 1

1. What fraction of each diagram is shaded?

2

Circle $\frac{4}{5}$ of the flowers.

3

Colour $\frac{1}{3}$ of the line.

4 3F– 2

Find:

a. $\frac{1}{5}$ of 35

b. $\frac{1}{10}$ of 40

c. $\frac{1}{8}$ of 24

5 3F– 3

Label the points on this number line.

0 1

6

Add the missing labels to the measuring jug.

1 litre

litre

litre

$\frac{1}{4}$ litre

Answers

Fractions

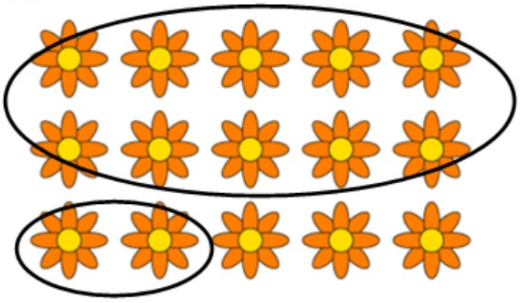
1 3F– 1

1. What fraction of each diagram is shaded?

1/3 1/5 1/6 1/4 1/2

2

Circle $\frac{4}{5}$ of the flowers.



3

Colour $\frac{1}{3}$ of the line.

4 3F– 2

Find:

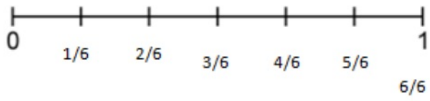
a. $\frac{1}{5}$ of 35 7

b. $\frac{1}{10}$ of 40 4

c. $\frac{1}{8}$ of 24 3

5 3F– 3

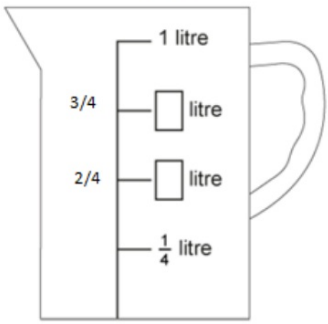
Label the points on this number line.



6/6

6

Add the missing labels to the measuring jug.



7 3F– 4

Diego writes:

$\frac{3}{12}+\frac{5}{12}=\frac{8}{12}$

Mark writes:

$\frac{3}{12}+\frac{5}{12}=\frac{8}{24}$

Who is correct? Explain the mistake that has been made.

Diego is correct. Mistake: Mark has added the denominators

8 4F– 1

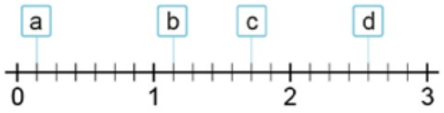
What are the values of a, b, c and d?

A= 1/7

B= 1 1/7

C: 1 5/7

D= 2 4/7



9 4F– 2

Which of these fractions are equivalent to a whole number? Explain how you know.

$\frac{48}{6}$ $\frac{48}{7}$ $\frac{48}{8}$ $\frac{48}{9}$ $\frac{48}{10}$

10 4F– 2

Fill in the missing numbers.

$2\frac{1}{7}$	$2\frac{4}{7}$	3	3 3/7	$3\frac{6}{7}$	4 2/7

11 5F– 1

Find:

$\frac{3}{8}$ of 32 — 12

$\frac{2}{9}$ of 45 — 10

$\frac{3}{5}$ of 30 — 18

12 5F– 2

Fill in the missing digits.

$\frac{4}{8}=\frac{12}{\square}$ — 24

$\frac{3}{5}=\frac{\square}{40}$ — 24

$\frac{3}{\square}=\frac{21}{63}$ — 9

$\frac{20}{30}=\frac{\square}{15}$ — 10

WALT assess our fraction knowledge

You have now marked your fractions quiz

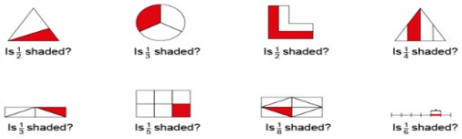
You need to choose two areas to work on based on this quiz for the lesson.

You need to look at the codes next to the question to choose the topics

3F-1 *Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts*

1. What fraction of each diagram is shaded?

2. Does each diagram show the given fraction? Explain your answers.



3. What fraction of each diagram is shaded/highlighted?

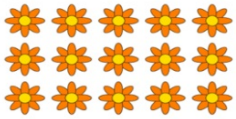
a. b. c.

4. Tick or cross each diagram to show whether $\frac{3}{5}$ is shaded. Explain your answers.

5. a. Shade $\frac{1}{10}$ of this set.

b. Shade $\frac{3}{4}$ of this shape.

c. Circle $\frac{4}{5}$ of the flowers.



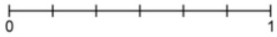
d. Colour $\frac{1}{3}$ of the line.

3F-2 *Find unit fractions of quantities using know division facts (multiplication tables fluency).*

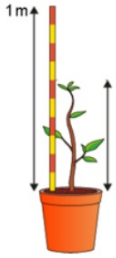
1. Rohan saved £32. He spends $\frac{1}{4}$ of his money on a toy. How much does he spend?
2. Find:
   a. $\frac{1}{5}$ of 35
   b. $\frac{1}{10}$ of 40
   c. $\frac{1}{8}$ of 24
3. The school caretaker buys 50 litres of paint. She uses $\frac{1}{5}$ of it to paint the year 3 classroom. How many litres of paint is this?
4. There are 16 apples in a fruit bowl. Some children eat $\frac{1}{4}$ of the apples. How many are left?

3F-3 *Reason about the location of any fraction within 1 in the linear number system*

1. Label the points on this number line.



2. How tall is this plant? Give your answer as a fraction of a metre.

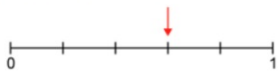


The pl

3. a. Which is larger, $\frac{6}{8}$ or $\frac{3}{8}$? Explain your answ

b. Which is larger, $\frac{1}{4}$ or $\frac{1}{3}$? Explain your answ

4. Gemma and Kasper look at this number line.



Gemma says the arrow is pointing to the number $\frac{3}{4}$.

Kasper says the arrow is pointing to the number $\frac{3}{5}$.

3F-4 *Add and subtract fractions with the same denomination, within 1*

1. Complete the calculations.

$\frac{5}{9}+\frac{1}{9}=\frac{\square}{\square}$ $\quad$ $\frac{6}{8}-\frac{2}{8}=\frac{\square}{\square}$

$\frac{5}{12}+\frac{3}{12}=\frac{\square}{\square}$ $\quad$ $\frac{9}{11}-\frac{6}{11}=\frac{\square}{\square}$

$\frac{5}{14}+\frac{7}{14}=\frac{\square}{\square}$ $\quad$ $\frac{9}{10}-0=\frac{\square}{\square}$

2. Diego writes:

$\frac{3}{12}+\frac{5}{12}=\frac{8}{12}$

Mark writes:

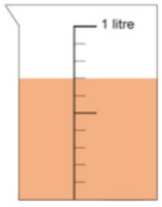
$\frac{3}{12}+\frac{5}{12}=\frac{8}{24}$

Who is correct? Explain the mistake that has been made.

3. Decide whether each calculation is correct or not. Explain your answers.

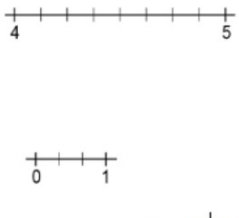
	Correct (✓) or incorrect (×)?	Explanation
$\frac{7}{12}-\frac{2}{12}=\frac{5}{12}$		
$\frac{4}{7}-\frac{2}{7}=\frac{2}{0}$		
$\frac{8}{10}-\frac{2}{10}-\frac{1}{10}=\frac{3}{10}$		
$\frac{7}{9}-\frac{7}{9}=0$		
$\frac{5}{8}-\frac{2}{8}-\frac{2}{8}=\frac{1}{8}$		

4. Sofia had a jug containing $\frac{7}{10}$ of a litre of juice. She drank $\frac{4}{10}$ of a litre. How much does she have left?

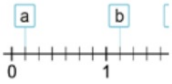


4F-1 Reason about the location of mixed numbers in the linear number system

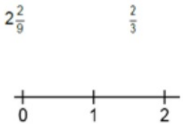
Add labels to each mark on the number lines.



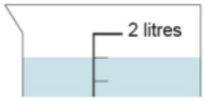
What are the values of a, b, c and d?



Estimate the position of the following numbe



4. How much water is in the beaker? Write your answer as a mixed number.



4F-2 Convert between mixed numbers and improper fractions

1. Which of these fractions are equivalent to a whole number? Explain how you know.

$\frac{48}{6}$ $\frac{48}{7}$ $\frac{48}{8}$ $\frac{48}{9}$ $\frac{48}{10}$

2. Express the following mixed numbers as improper fractions.

$4\frac{1}{8}$ $6\frac{4}{9}$ $3\frac{11}{12}$ $8\frac{2}{3}$

3. Express the following improper fractions as mixed numbers.

$\frac{17}{2}$ $\frac{13}{6}$ $\frac{28}{10}$ $\frac{41}{7}$

4. Sarah wants to convert $\frac{17}{4}$ to a mixed number. She writes:

$\frac{17}{4} = 3\frac{5}{4}$

Explain what mistake Sarah has made, and write the correct answer.

5. The school kitchen has 17 packs of butter. Each pack weighs $\frac{1}{4}$kg. How many kilograms of butter do they have altogether? Express your answer as a mixed number.

6. I have a $6\frac{1}{2}$m length of string. How many $\frac{1}{2}$m lengths can I cut?

4F-3 Add and subtract improper and mixed fractions (same denominator).

1. It is a $2\frac{3}{4}$km cycle ride to my friend's house, and a further $\frac{3}{4}$km ride to the park. How far do I have to cycle altogether?
2. I have 5m of rope. I cut off $\frac{4}{10}$m. How much rope is left?
3. Fill in the missing n

$2\frac{1}{7}$	$2\frac{4}{7}$	

4. The table below sh
week. For how long

h

5. A tailor has $3\frac{7}{10}$m
is left?

5F-1 Find non-unit fractions of quantities.

1. Find:

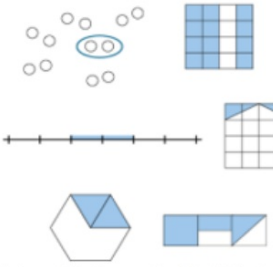
   $\frac{3}{8}$ of 32 $\frac{2}{9}$ of 45 $\frac{3}{5}$ of 30

   $\frac{2}{7}$ of 630 $\frac{4}{9}$ of 315 $\frac{2}{5}$ of 3,500 $\frac{5}{8}$ of 2,720

2. Stan bought 15 litres of paint and used $\frac{2}{3}$ of it decorating his house. How much paint has he used?
3. My granny lives 120km from us. We are driving to see her and are $\frac{5}{6}$ of the way there. How far have we driven so far?
4. I am $\frac{3}{4}$ of the way through my holiday. I have 3 days of holiday left. How many days have I already been on holiday for?
5. A school is trying to raise £7,500 for charity. They have raised $\frac{5}{6}$ of the total so far. How much have they raised?
6. $\frac{4}{5}$ of the runners in a race have finished the race so far. If 92 people have finished, how many runners were in the race altogether?
7. There are 315 cows on a farm. $\frac{3}{5}$ of the cows are having calves this year. How many cows are not having calves?

5F-2 Find equivalent fractions

1. Find different ways to write the fraction of each shape or quantity that is shaded or highlighted.



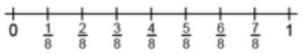
2. Draw lines to match the unit fractions on the left with their equivalent fractions on the right.

$\frac{1}{5}$	$\frac{3}{12}$
$\frac{1}{4}$	$\frac{4}{20}$
$\frac{1}{3}$	$\frac{3}{9}$

3. Mark each fraction on the number line.

$\frac{9}{24}$ $\frac{36}{48}$ $\frac{12}{16}$ $\frac{10}{40}$ $\frac{9}{72}$

Hint: convert each fraction to an equivalent fraction with a denominator of 8.



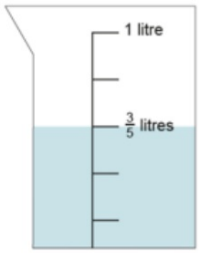
4. Use the numbers 3, 24, 8 and 1 to complete this chain of equivalent fractions.

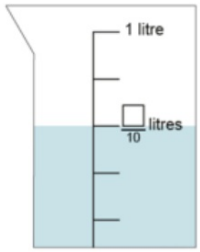
$\frac{2}{6} = \frac{\square}{\square} = \frac{\square}{\square}$

5. Fill in the missing digits.

$\frac{4}{8} = \frac{12}{\square}$ $\frac{3}{5} = \frac{\square}{40}$ $\frac{3}{\square} = \frac{21}{63}$ $\frac{20}{30} = \frac{\square}{15}$

6. Fill in the missing number.





7. Sally and Tahira each have a 1m ribbon.

Sally cuts her ribbon into 5 equal parts and uses 1 of them to make a hair tie.

Tahira cuts her ribbon into 10 equal parts and uses 3 of them to make a bracelet.

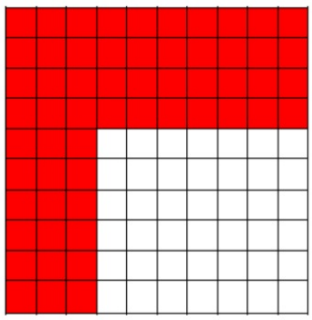
Have Sally and Tahira used the same amount of ribbon? Explain your answer.

Lesson 5

WALT explore decimals up to two decimal points

Mega Challenge

Write the decimal number that is illustrated below:



Of the red section

Write five and ninety-one tenths as a decimal number.

Insert < or > to make the statement below true.

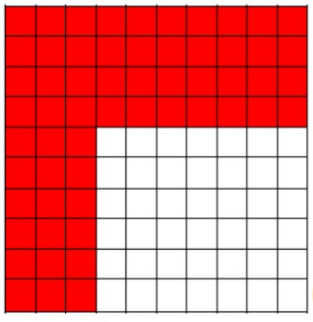
0.06 ▭ 0.006

Vocabulary

decimals
place value
tenth
hundredth
whole number
equivalent
partitioning
rounding

WALT explore decimals up to two decimal points

Write the decimal number that is illustrated below:



0.76

Write five and ninety-one tenths as a decimal number. 5.91

Insert < or > to make the statement below true.

0.06 > 0.006

If you correctly answered all of the mega challenge question, move on to the class questions.

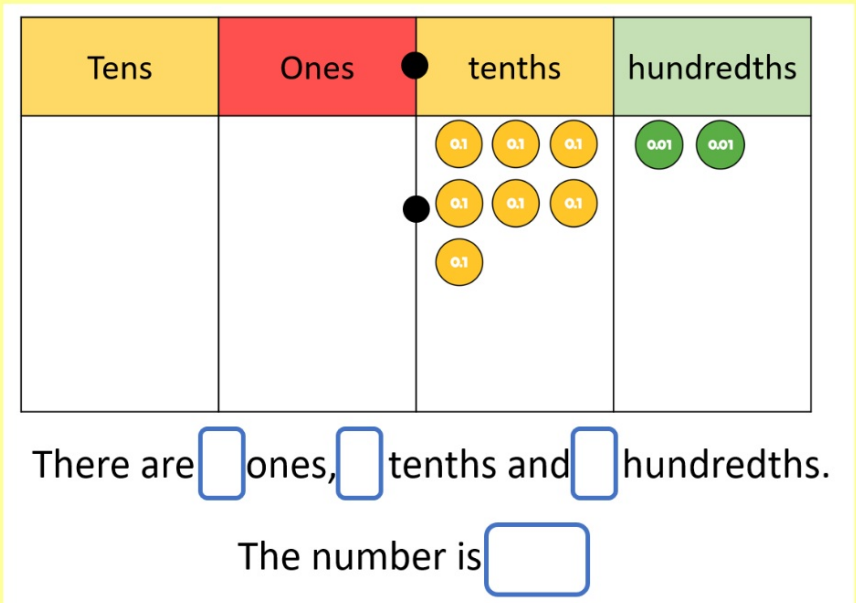
If you did not answer all the mega challenge correctly, stay with me to learn more.

Class questions - see next slide!

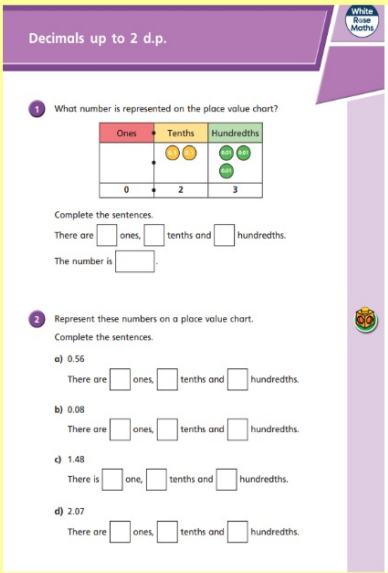
REASON AND PEER MARK FOR EVERY QUESTION!

WALT explore decimals up to two decimal points

LET'S LEARN



WALT explore decimals up to two decimal points



Decimals up to 2 d.p.

1 What number is represented on the place value chart?

Ones	Tenths	Hundredths
0	2	3

Complete the sentences.

There are ☐ ones, ☐ tenths and ☐ hundredths.

The number is ☐.

2 Represent these numbers on a place value chart.

Complete the sentences.

a) 0.56

There are ☐ ones, ☐ tenths and ☐ hundredths.

b) 0.08

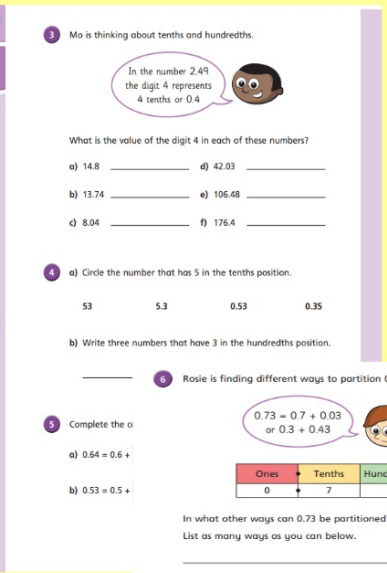
There are ☐ ones, ☐ tenths and ☐ hundredths.

c) 1.48

There is ☐ one, ☐ tenths and ☐ hundredths.

d) 2.07

There are ☐ ones, ☐ tenths and ☐ hundredths.



3 Mo is thinking about tenths and hundredths.

In the number 2.49 the digit 4 represents 4 tenths or 0.4

What is the value of the digit 4 in each of these numbers?

a) 14.8 _____ **d)** 42.03 _____

b) 13.74 _____ **e)** 106.48 _____

c) 8.04 _____ **f)** 176.4 _____

4 **a)** Circle the number that has 5 in the tenths position.

53 **5.3** **0.53** **0.35**

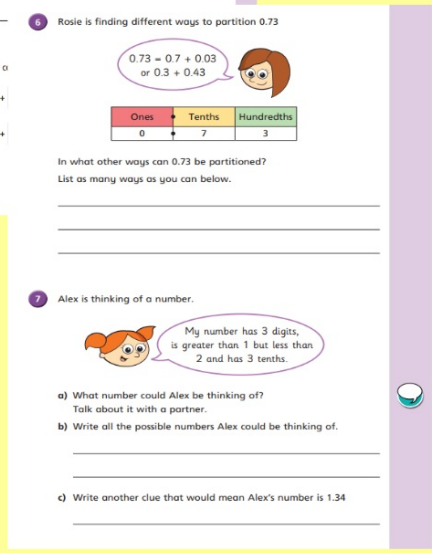
b) Write three numbers that have 3 in the hundredths position.

_____

5 Complete the c

a) 0.64 = 0.6 +

b) 0.53 = 0.5 +



6 Rosie is finding different ways to partition 0.73

0.73 = 0.7 + 0.03 or 0.3 + 0.43

Ones	Tenths	Hundredths
0	7	3

In what other ways can 0.73 be partitioned?

List as many ways as you can below.

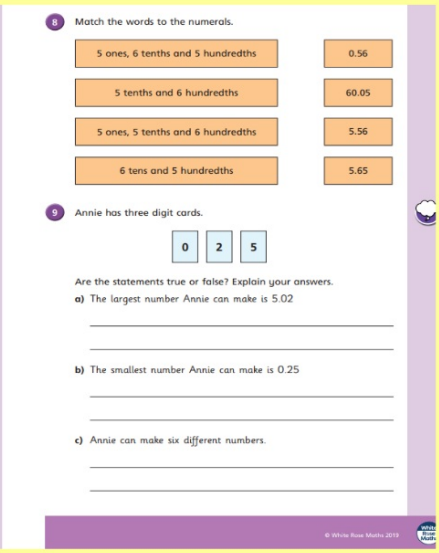
7 Alex is thinking of a number.

My number has 3 digits, is greater than 1 but less than 2 and has 3 tenths.

a) What number could Alex be thinking of?
Talk about it with a partner.

b) Write all the possible numbers Alex could be thinking of.

c) Write another clue that would mean Alex's number is 1.34



8 Match the words to the numerals.

5 ones, 6 tenths and 5 hundredths	0.56
5 tenths and 6 hundredths	60.05
5 ones, 5 tenths and 6 hundredths	5.56
6 tens and 5 hundredths	5.65

9 Annie has three digit cards.

0	2	5

Are the statements true or false? Explain your answers.

a) The largest number Annie can make is 5.02

b) The smallest number Annie can make is 0.25

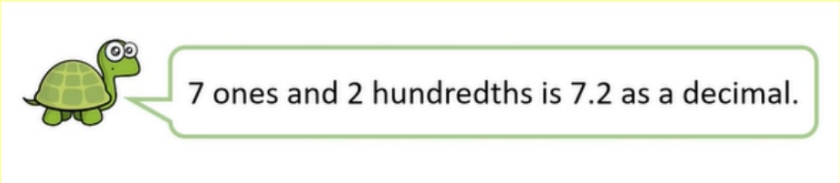
c) Annie can make six different numbers.

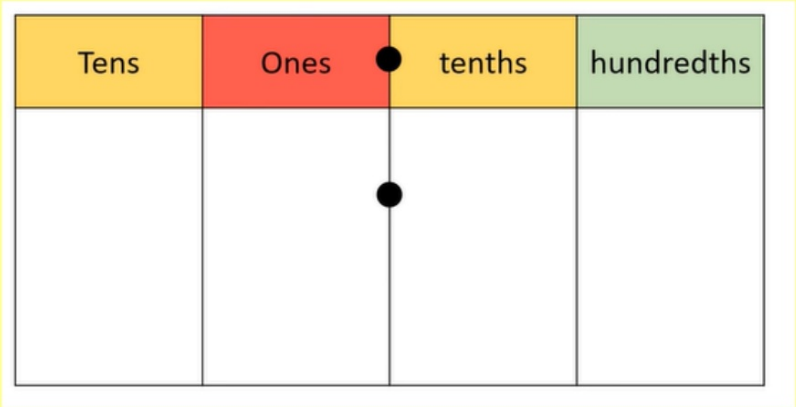
Do it!

Reason it!

Peer Mark it!

WALT explore decimals up to two decimal points

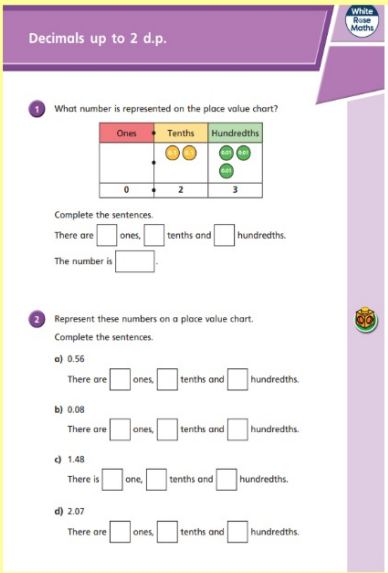




Where has tiny gone wrong?

WE DO

WALT explore decimals up to two decimal points



Decimals up to 2 d.p.

1 What number is represented on the place value chart?

Ones	Tenths	Hundredths
0	2	3

Complete the sentences.

There are ☐ ones, ☐ tenths and ☐ hundredths.

The number is ☐.

2 Represent these numbers on a place value chart.

Complete the sentences.

a) 0.56

There are ☐ ones, ☐ tenths and ☐ hundredths.

b) 0.08

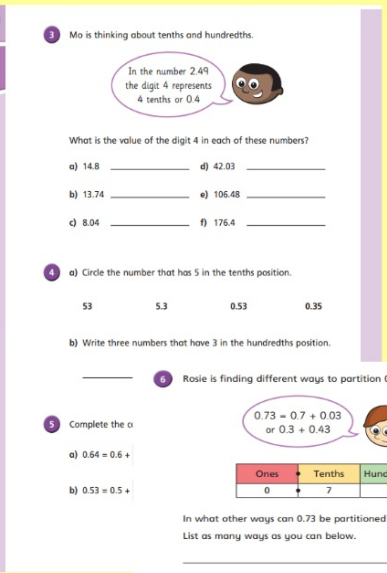
There are ☐ ones, ☐ tenths and ☐ hundredths.

c) 1.48

There is ☐ one, ☐ tenths and ☐ hundredths.

d) 2.07

There are ☐ ones, ☐ tenths and ☐ hundredths.



3 Mo is thinking about tenths and hundredths.

In the number 2.49 the digit 4 represents 4 tenths or 0.4

What is the value of the digit 4 in each of these numbers?

a) 14.8 _____ **d)** 42.03 _____

b) 13.74 _____ **e)** 106.48 _____

c) 8.04 _____ **f)** 176.4 _____

4 **a)** Circle the number that has 5 in the tenths position.

53 **5.3** **0.53** **0.35**

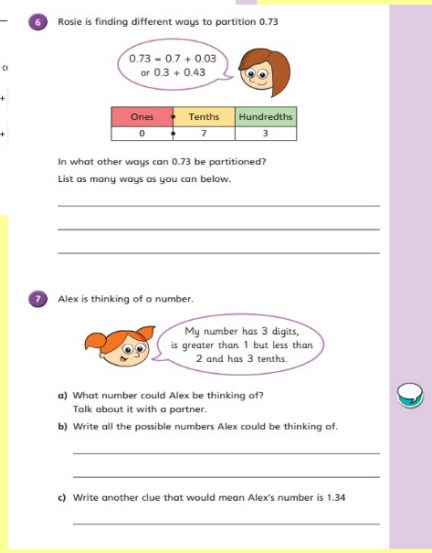
b) Write three numbers that have 3 in the hundredths position.

_____

5 Complete the c

a) 0.64 = 0.6 +

b) 0.53 = 0.5 +



6 Rosie is finding different ways to partition 0.73

0.73 = 0.7 + 0.03 or 0.3 + 0.43

Ones	Tenths	Hundredths
0	7	3

In what other ways can 0.73 be partitioned?

List as many ways as you can below.

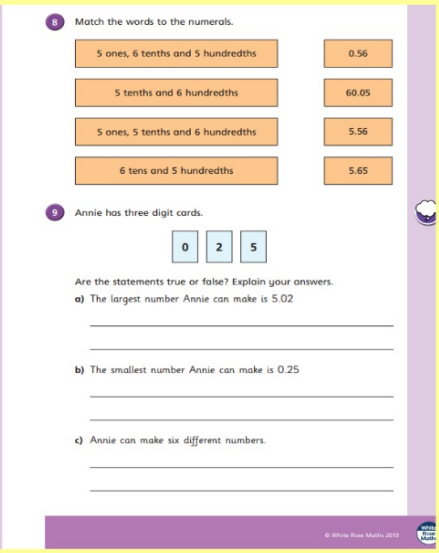
7 Alex is thinking of a number.

My number has 3 digits, is greater than 1 but less than 2 and has 3 tenths.

a) What number could Alex be thinking of?
Talk about it with a partner.

b) Write all the possible numbers Alex could be thinking of.

c) Write another clue that would mean Alex's number is 1.34



8 Match the words to the numerals.

5 ones, 6 tenths and 5 hundredths	0.56
5 tenths and 6 hundredths	60.05
5 ones, 5 tenths and 6 hundredths	5.56
6 tens and 5 hundredths	5.65

9 Annie has three digit cards.

0	2	5

Are the statements true or false? Explain your answers.

a) The largest number Annie can make is 5.02

b) The smallest number Annie can make is 0.25

c) Annie can make six different numbers.

Do it!

Reason it!

Peer Mark it!

Answers

Decimals up to 2 d.p.

1 What number is represented on the place value chart?

Ones	Tenths	Hundredths
	0.1 0.1	0.01 0.01 0.01
0	2	3

Complete the sentences.

There are [0] ones, [2] tenths and [3] hundredths.

The number is [0·23].

2 Represent these numbers on a place value chart.

Complete the sentences.

a) 0.56

There are [0] ones, [5] tenths and [6] hundredths.

b) 0.08

There are [0] ones, [0] tenths and [8] hundredths.

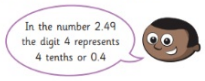
c) 1.48

There are [1] ones, [4] tenths and [8] hundredths.

d) 2.07

There are [2] ones, [0] tenths and [7] hundredths.

3 Mo is thinking about tenths and hundredths.



What is the value of the digit 4 in each of these numbers?

a) 14.8 4 ones

b) 13.74 4 hundredths

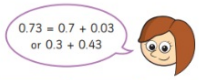
c) 8.04 4 hundredths

d) 42.03 4 tens

e) 106.48 4 tenths

f) 176.4 4 tenths

6 Rosie is finding different ways to partition 0.73



Ones	Tenths	Hundredths
0	7	3

In what other ways can 0.73 be partitioned?

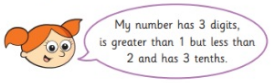
List as many ways as you can below.

0·1 + 0·63 0·5 + 0·23

0·2 + 0·53 0·6 + 0·13

0·4 + 0·33

7 Alex is thinking of a number.



a) What number could Alex be thinking of?
Talk about it with a partner.

b) Write all the possible numbers Alex could be thinking of.

1·30, 1·31, 1·32, 1·33, 1·34, 1·35, 1·36, 1·37, 1·38, 1·39

c) Write another clue that would mean Alex's number is 1.34

It has 4 hundredths.

8 Match the words to the numerals.

5 ones, 6 tenths and 5 hundredths	0.56
5 tenths and 6 hundredths	60.05
5 ones, 5 tenths and 6 hundredths	5.56
6 tens and 5 hundredths	5.65

9 Annie has three digit cards.

0	2	5

Are the statements true or false? Explain your answers.

a) The largest number Annie can make is 5.02

False 5·20 > 5·02

b) The smallest number Annie can make is 0.25

True

c) Annie can make six different numbers.

0·25 0·52 2·05 2·50 5·02 5·20

True

Plenary

0.64