



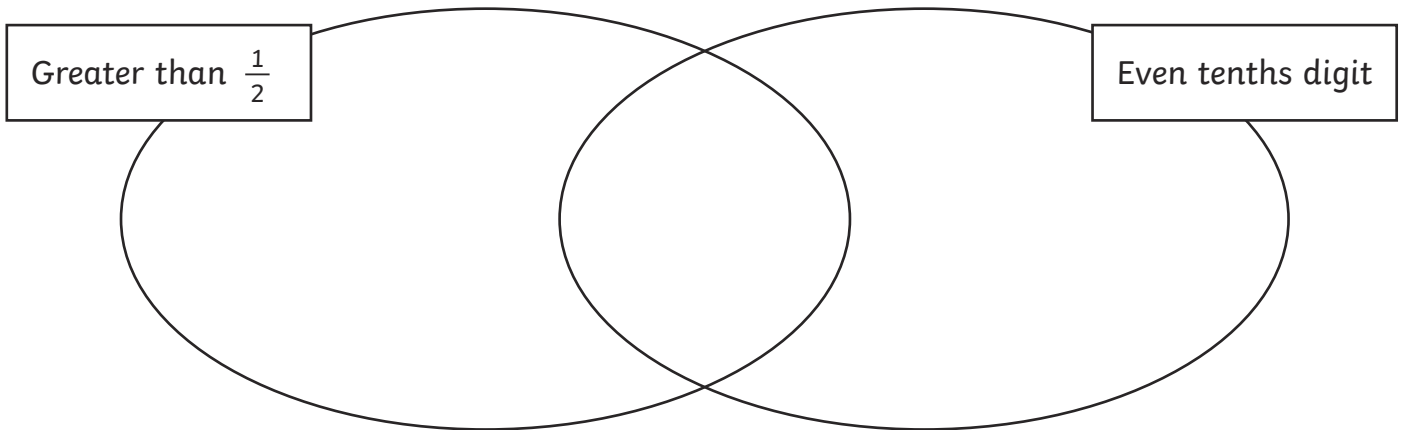
Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.



Write each fraction as a decimal and then sort the decimals into the correct place on the Venn diagram:

$\frac{1}{10} =$	$\frac{2}{10} =$	$\frac{3}{10} =$	$\frac{4}{10} =$
$\frac{5}{10} =$	$\frac{6}{10} =$	$\frac{7}{10} =$	$\frac{8}{10} =$
$\frac{9}{10} =$	$\frac{55}{100} =$	$\frac{25}{100} =$	$\frac{75}{100} =$



Write each fraction as a decimal and then sort the decimal numbers into the correct place on the Carroll diagram:

$\frac{1}{10} =$	$\frac{27}{100} =$	$\frac{2}{10} =$	$\frac{43}{100} =$
$\frac{59}{100} =$	$\frac{3}{10} =$	$\frac{72}{100} =$	$\frac{6}{10} =$
$\frac{8}{10} =$	$\frac{85}{100} =$	$\frac{9}{10} =$	$\frac{94}{100} =$

	Odd tenths digit	Even tenths digit
Less than $\frac{1}{2}$		
Greater than $\frac{1}{2}$		



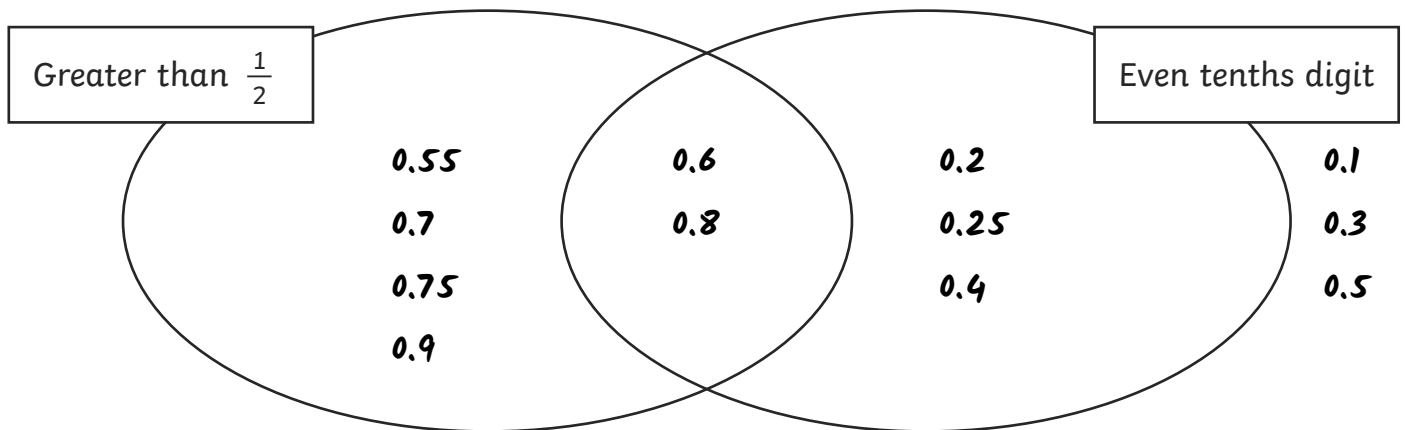
Decimal Numbers as Fractions **Answers**

I can read and write decimal numbers as fractions.



Write each fraction as a decimal and then sort the decimals into the correct place on the Venn diagram:

$\frac{1}{10} = 0.1$	$\frac{2}{10} = 0.2$	$\frac{3}{10} = 0.3$	$\frac{4}{10} = 0.4$
$\frac{5}{10} = 0.5$	$\frac{6}{10} = 0.6$	$\frac{7}{10} = 0.7$	$\frac{8}{10} = 0.8$
$\frac{9}{10} = 0.9$	$\frac{55}{100} = 0.55$	$\frac{25}{100} = 0.25$	$\frac{75}{100} = 0.75$



Write each fraction as a decimal and then sort the decimal numbers into the correct place on the Carroll diagram:

$\frac{1}{10} = 0.1$	$\frac{27}{100} = 0.27$	$\frac{2}{10} = 0.2$	$\frac{43}{100} = 0.43$
$\frac{59}{100} = 0.59$	$\frac{3}{10} = 0.3$	$\frac{72}{100} = 0.72$	$\frac{6}{10} = 0.6$
$\frac{8}{10} = 0.8$	$\frac{85}{100} = 0.85$	$\frac{9}{10} = 0.9$	$\frac{94}{100} = 0.94$

	Odd tenths digit	Even tenths digit
Less than $\frac{1}{2}$	0.1, 0.3	0.27, 0.2, 0.43
Greater than $\frac{1}{2}$	0.59, 0.72, 0.9, 0.94	0.6, 0.8, 0.85



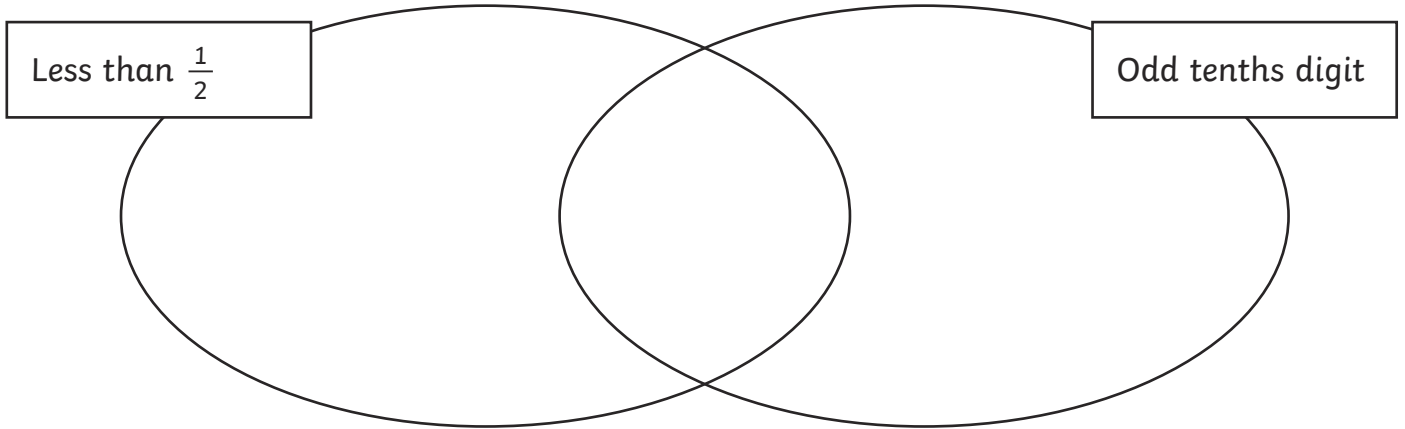
Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.



Write each fraction as a decimal and then sort the decimals into the correct place on the Venn diagram:

$\frac{1}{10} =$	$\frac{29}{100} =$	$\frac{3}{10} =$	$\frac{47}{100} =$
$\frac{5}{10} =$	$\frac{6}{10} =$	$\frac{7}{10} =$	$\frac{8}{10} =$
$\frac{91}{100} =$	$\frac{55}{100} =$	$\frac{25}{100} =$	$\frac{75}{100} =$



Write each fraction as a decimal and then sort the decimal numbers into the correct place on the Carroll diagram:

$\frac{11}{100} =$	$\frac{27}{100} =$	$\frac{26}{100} =$	$\frac{43}{100} =$
$\frac{59}{100} =$	$\frac{38}{100} =$	$\frac{72}{100} =$	$\frac{69}{100} =$
$\frac{85}{100} =$	$\frac{87}{100} =$	$\frac{94}{100} =$	$\frac{99}{100} =$

	Odd hundredths digit	Even hundredths digit
Less than $\frac{1}{2}$		
Greater than $\frac{1}{2}$		



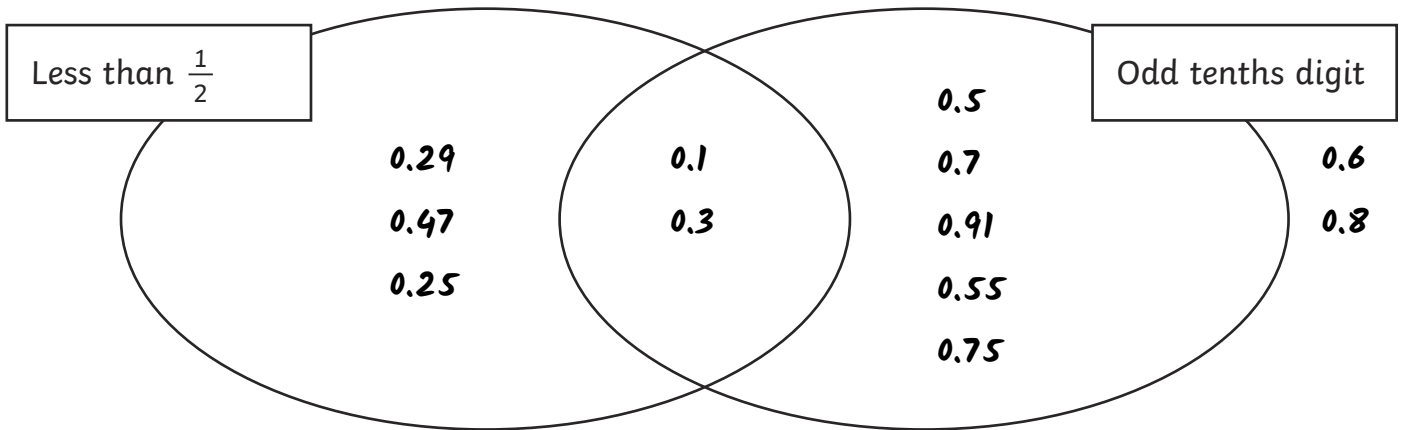
Decimal Numbers as Fractions **Answers**

I can read and write decimal numbers as fractions.



Write each fraction as a decimal and then sort the decimals into the correct place on the Venn diagram:

$\frac{1}{10} = 0.1$	$\frac{29}{100} = 0.29$	$\frac{3}{10} = 0.3$	$\frac{47}{100} = 0.47$
$\frac{5}{10} = 0.5$	$\frac{6}{10} = 0.6$	$\frac{7}{10} = 0.7$	$\frac{8}{10} = 0.8$
$\frac{91}{100} = 0.91$	$\frac{55}{100} = 0.55$	$\frac{25}{100} = 0.25$	$\frac{75}{100} = 0.75$



Write each fraction as a decimal and then sort the decimal numbers into the correct place on the Carroll diagram:

$\frac{11}{100} = 0.11$	$\frac{27}{100} = 0.27$	$\frac{26}{100} = 0.26$	$\frac{43}{100} = 0.43$
$\frac{59}{100} = 0.59$	$\frac{38}{100} = 0.38$	$\frac{72}{100} = 0.72$	$\frac{69}{100} = 0.69$
$\frac{85}{100} = 0.85$	$\frac{87}{100} = 0.87$	$\frac{94}{100} = 0.94$	$\frac{99}{100} = 0.99$

	Odd hundredths digit	Even hundredths digit
Less than $\frac{1}{2}$	0.11, 0.27, 0.43	0.26, 0.38
Greater than $\frac{1}{2}$	0.59, 0.69, 0.85, 0.87, 0.99	0.72, 0.94



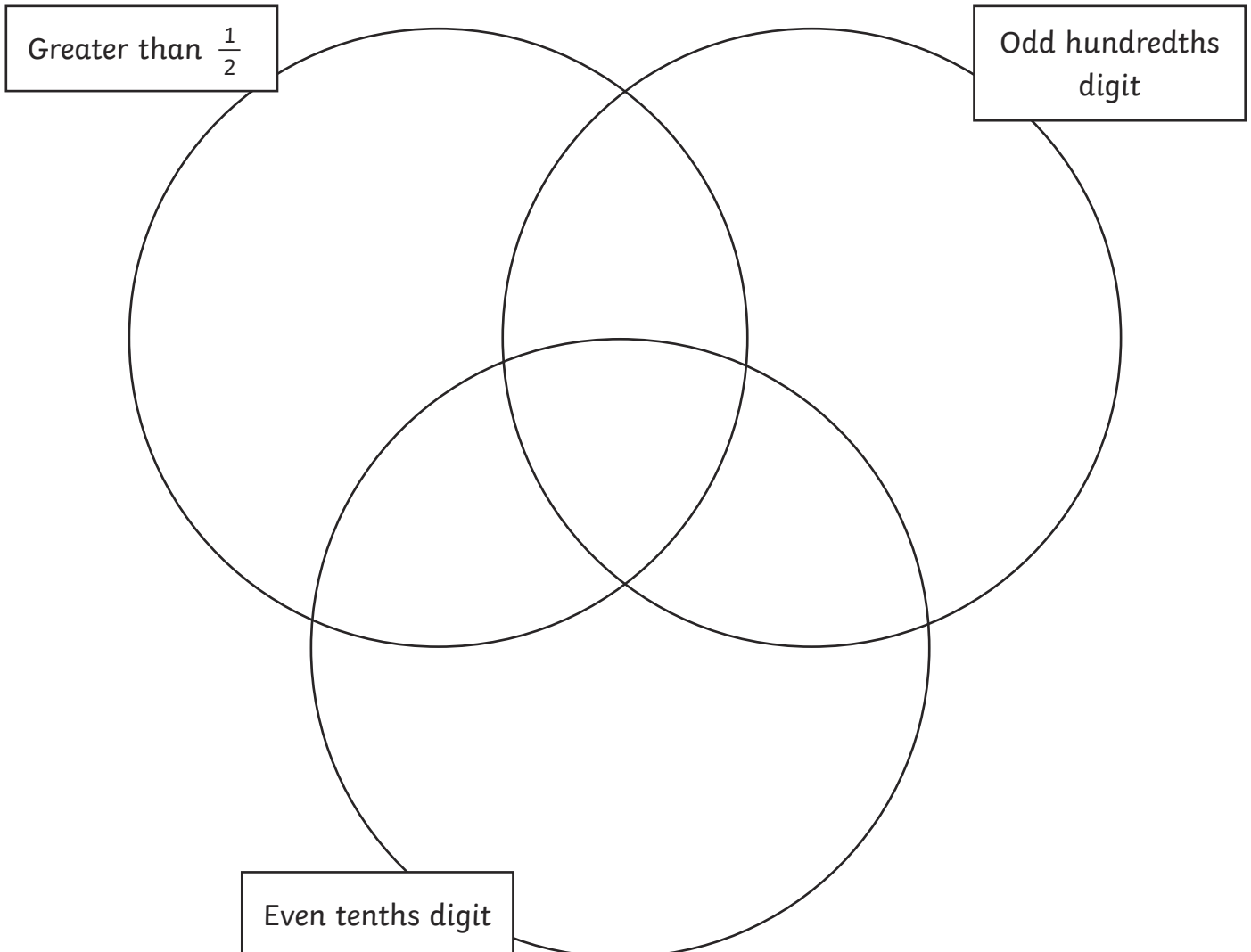
Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.



Write each fraction as a decimal and then sort the decimals into the correct place on the Venn diagram:

$\frac{13}{100} =$	$\frac{29}{100} =$	$\frac{32}{100} =$	$\frac{47}{100} =$
$\frac{56}{100} =$	$\frac{61}{100} =$	$\frac{78}{100} =$	$\frac{84}{100} =$
$\frac{91}{100} =$	$\frac{55}{100} =$	$\frac{42}{100} =$	$\frac{35}{100} =$





Decimal Numbers as Fractions

Write each fraction as a decimal and then sort the decimal numbers into the correct place on the Carroll diagram:

$\frac{11}{100} =$	$\frac{23}{100} =$	$\frac{14}{100} =$	$\frac{9}{100} =$
$\frac{59}{100} =$	$\frac{38}{100} =$	$\frac{72}{100} =$	$\frac{69}{100} =$
$\frac{85}{100} =$	$\frac{6}{100} =$	$\frac{94}{100} =$	$\frac{22}{100} =$

	Odd hundredths digit	Even hundredths digit
Less than $\frac{1}{4}$		
Greater than $\frac{1}{4}$		



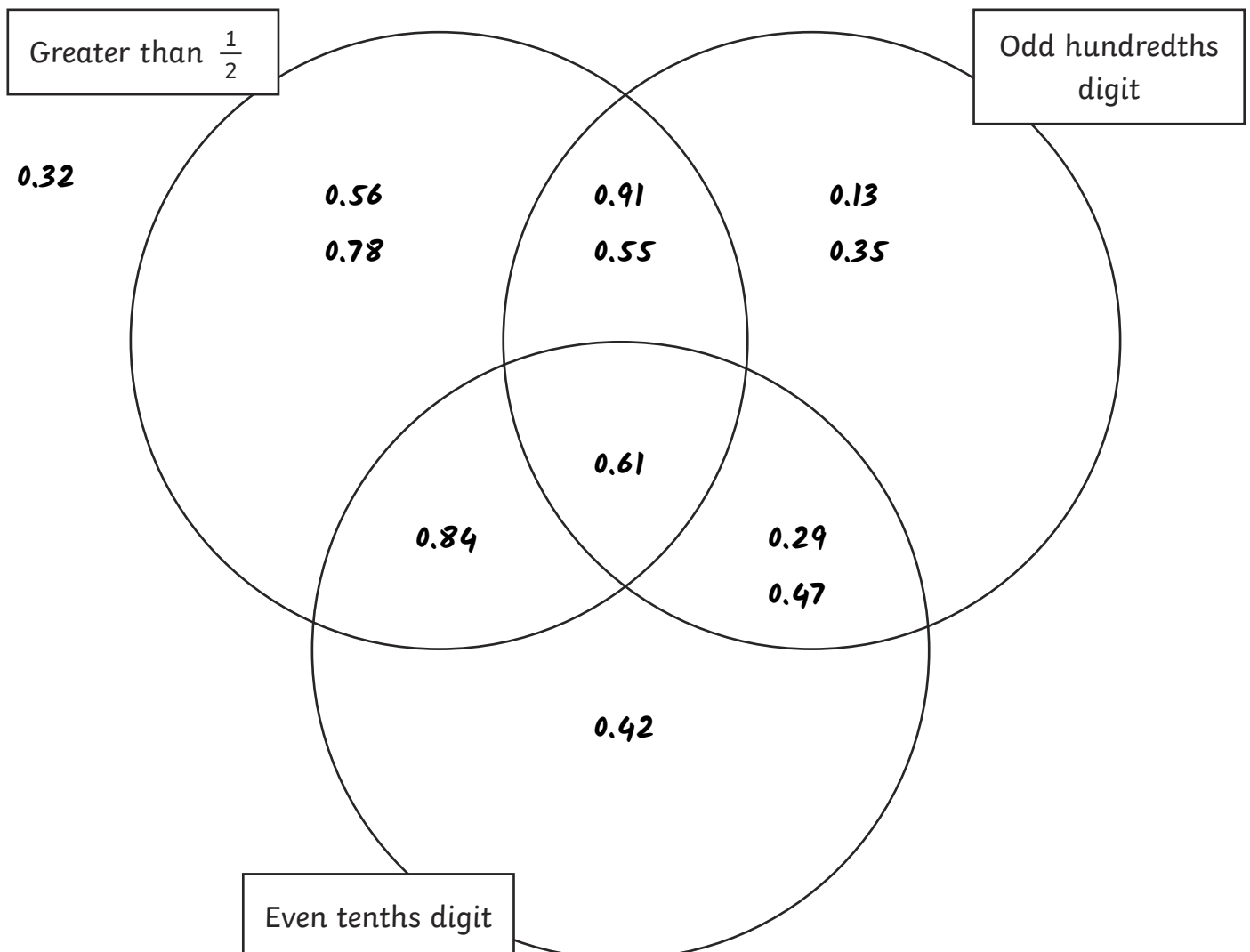
Decimal Numbers as Fractions **Answers**

I can read and write decimal numbers as fractions.



Write each fraction as a decimal and then sort the decimals into the correct place on the Venn diagram:

$\frac{13}{100} = 0.13$	$\frac{29}{100} = 0.29$	$\frac{32}{100} = 0.32$	$\frac{47}{100} = 0.47$
$\frac{56}{100} = 0.56$	$\frac{61}{100} = 0.61$	$\frac{78}{100} = 0.78$	$\frac{84}{100} = 0.84$
$\frac{91}{100} = 0.91$	$\frac{55}{100} = 0.55$	$\frac{42}{100} = 0.42$	$\frac{35}{100} = 0.35$





Decimal Numbers as Fractions **Answers**

Write each fraction as a decimal and then sort the decimal numbers into the correct place on the Carroll diagram:

$\frac{11}{100} = 0.11$	$\frac{23}{100} = 0.23$	$\frac{14}{100} = 0.14$	$\frac{9}{100} = 0.09$
$\frac{59}{100} = 0.59$	$\frac{38}{100} = 0.38$	$\frac{72}{100} = 0.72$	$\frac{69}{100} = 0.69$
$\frac{85}{100} = 0.85$	$\frac{6}{100} = 0.06$	$\frac{94}{100} = 0.94$	$\frac{22}{100} = 0.22$

	Odd hundredths digit	Even hundredths digit
Less than $\frac{1}{4}$	<i>0.11, 0.23, 0.09</i>	<i>0.14, 0.06, 0.22</i>
Greater than $\frac{1}{4}$	<i>0.59, 0.69, 0.85</i>	<i>0.38, 0.72, 0.94</i>

tens

10

ones

1

tenths

0.1

hundredths














0.01

Fractions: Decimal Numbers as Fractions

Aim: Read and write decimal numbers as fractions. I can read and write decimal numbers as fractions.	Success Criteria: I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths. I can write a decimal number as a fraction. I can use Venn and Carroll diagrams to sort decimal numbers.	Preparation: Differentiated Decimal Numbers as Fractions Activity Sheets - 1 per child Decimal Place Value Posters - 1 per class
	Key/New Words: Decimal, fraction, tenth, hundredth.	Resources: Lesson Pack Whiteboards and pens - class set A music track of your choice

Prior Learning: It will be helpful if children have experience identifying the value of digits in whole numbers and recognise tenths and hundredths in the context of money and measurement.

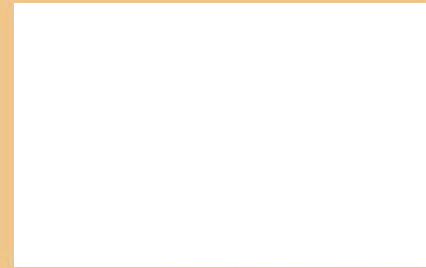
Learning Sequence

	Decimal Tenths: Use the counting stick on the Lesson Presentation to rehearse counting forwards and backwards in different steps of decimal tenths.	
	Decimal Numbers: Use the text and images displayed on the Lesson Presentation to remind the children that numbers that have digits to the right of a decimal point are numbers between whole numbers. Rehearse the decimal place value positions of tenths and hundredths and reading and writing decimals as fractions with a denominator of ten or one hundred.	
	What's My Number? The children sit back to back with their partner, with only one child able to see the whiteboard. The child facing the whiteboard has thirty seconds to describe the decimal number shown on the Lesson Presentation using the language of tenths and hundredths. The pair score 1 point if the other child writes the correct fraction equivalent on their individual whiteboard. The children swap roles for the next round. Model an example of describing a number to the whole class if required.	
	Decimal Numbers as Fractions: Children complete the differentiated Decimal Numbers as Fractions Activity Sheets , to show they can read and write decimal numbers as fractions.	
	 Write the simpler decimal numbers as fractions and sort into the correct places on the Venn and Carroll Diagrams by reasoning about tenths and hundredths.  Write the decimal numbers as fractions and sort into the correct places on the Venn and Carroll Diagrams by reasoning about tenths and hundredths.  Write the decimal numbers as fractions and sort into the correct places on the more complex Venn and Carroll Diagrams by reasoning about tenths and hundredths.	
	Place Value Disco: Place the Decimal Place Value Posters around the classroom. The whole class should stand in the centre of the room. When the music plays, they can move around the room. When the music stops, each child should move to stand at one of the place value posters. A decimal number will then be shown on the Lesson Presentation . If the highlighted digit is in the place value column of the poster the children chose to stand at, they score a point.	

Masterit

Exploreit: Children measure objects around the classroom and give the measurements in both decimals and fractions, e.g. $5.6\text{cm} = 5\frac{6}{10}\text{cm}$, $4.78\text{m} = 4\frac{76}{100}\text{m}$

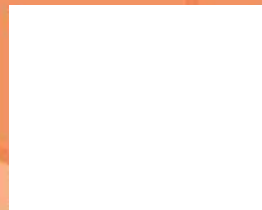
Orderit: The children order measurements written as decimals to create number lines, writing the fraction equivalents.



Maths

Fractions

Decimal Numbers as Fractions



Aim

- I can read and write decimal numbers as fractions.

Success Criteria

- I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.
- I can write a decimal number as a fraction.
- I can use Venn and Carroll diagrams to sort decimal numbers.

Decimal Tenths

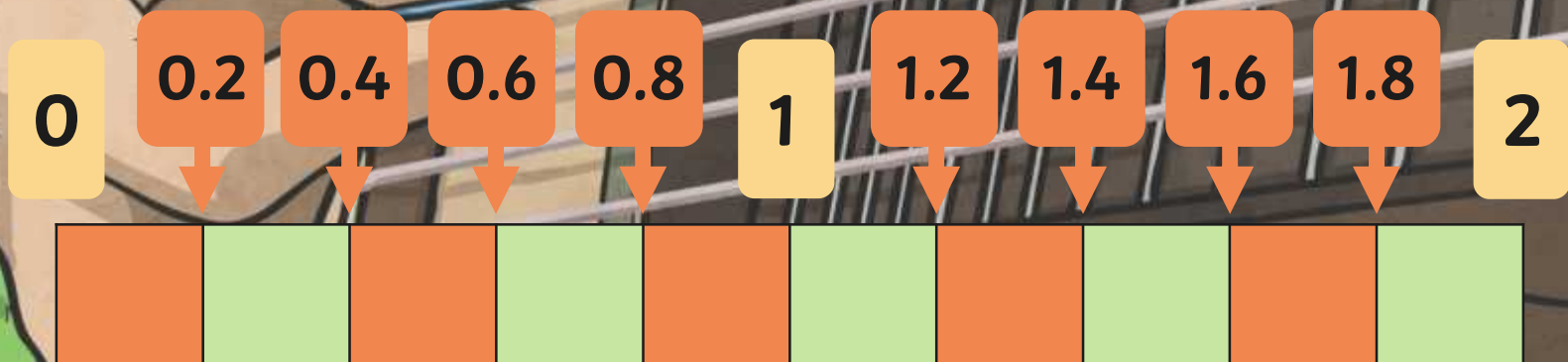
Count forwards and backwards along the decimal tenths counting stick.



Decimal Tenths Counting Stick



Count forwards and backwards along the decimal tenths counting stick.



Decimal Tenths Counting Stick



Count forwards and backwards along the decimal tenths counting stick.



Decimal Numbers

Whole Class

Not all numbers are whole numbers. Numbers that have digits to the right of a decimal point are numbers between whole numbers.

509.005

4.5

2.54

0.1

19.01

8.505

0.4



Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the decimal point** is a **tenth**.

Ones

Tenths

0 • 3

$$0.3 = \frac{3}{10}$$

This decimal number has three tenths.

Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the decimal point** is a **tenth**.

Ones

Tenths

0 • 8

$$0.8 = \frac{8}{10}$$

This decimal number has eight tenths.

Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the decimal point** is a **tenth**.

Ones

Tenths

0 • 2

$$0.2 = \frac{2}{10}$$

This decimal number has two tenths.

Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the decimal point** is a **tenth**.

Ones

Tenths

0 . 9

$$0.9 = \frac{9}{10}$$

This decimal number has nine tenths.

Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the tenth column** is a **hundredth**.

Ones	Tenths	Hundredth
0	3	5

$$0.35 = \frac{35}{100}$$

This decimal number has three tenths.

This decimal number has five hundredths.

Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the tenth column** is a **hundredth**.

Ones	Tenths	Hundredth
0	7	4

$$0.74 = \frac{74}{100}$$

This decimal number has seven tenths.

This decimal number has four hundredths.

Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the tenth column** is a **hundredth**.

Ones	Tenths	Hundredth
0	1	8

$$0.18 = \frac{18}{100}$$

This decimal number has one tenth.

This decimal number has eight hundredths.

Decimal Numbers



Let's explore the place value of a decimal number.

Any digit immediately to the **right of the tenth column** is a **hundredth**.

Ones	Tenths	Hundredth
0	0	5

$$0.05 = \frac{5}{100}$$

This decimal number has zero tenths.

This decimal number has five hundredths.

What's My Number?



Sit back to back with your partner, so that one of you can see the whiteboard and the other one can't.

The person facing the whiteboard will have 30 seconds to describe the decimal number shown on the board using the language of tenths and hundredths.

Score 1 point if the other person writes the correct fraction equivalent on their individual whiteboard.

Swap roles for the next round.

What's My Number?



Round 4

0.65

$$= \frac{65}{100}$$

Decimal Numbers as Fractions



Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.

Write each decimal as a fraction and then sort the decimals into the correct diagram.

$\frac{2}{10}$	$\frac{2}{10}$	$\frac{1}{10}$
$\frac{6}{40}$	$\frac{7}{10}$	$\frac{8}{10}$
$\frac{25}{100}$	$\frac{25}{100}$	$\frac{75}{100}$

Even tenths digit

Write each decimal as a decimal and then sort the decimal numbers into the correct place on the diagram.

$\frac{27}{100}$	$\frac{2}{10}$	$\frac{45}{100}$
$\frac{3}{10}$	$\frac{7}{100}$	$\frac{5}{10}$
$\frac{85}{100}$	$\frac{3}{10}$	$\frac{24}{100}$

Odd tenths digit

Even tenths digit

Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.

Write each decimal as a fraction and then sort the decimals into the correct place on the diagram.

$\frac{32}{100}$	$\frac{61}{100}$
$\frac{78}{100}$	$\frac{86}{100}$
$\frac{42}{100}$	$\frac{35}{100}$

Odd hundredths digit

Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.

Write each decimal as a fraction and then sort the decimals into the correct place on the diagram.

$\frac{2}{10}$	$\frac{27}{100}$
$\frac{7}{10}$	$\frac{8}{10}$
$\frac{25}{100}$	$\frac{75}{100}$

Odd hundredths digit

Write each decimal as a decimal and then sort the decimal numbers into the correct place on the diagram.

$\frac{76}{100}$	$\frac{45}{100}$
$\frac{7}{10}$	$\frac{64}{100}$
$\frac{24}{100}$	$\frac{22}{100}$

Odd hundredths digit

Even hundredths digit

Place Value Disco



Placed around the room are four different place value posters:
Tens, Ones, Tenths and Hundredths.

We are going to use these place value posters to play a game.

The whole class should stand in the centre of the room.

When the music plays, you can move around the room.

When the music stops, you should move to stand at one of the place value posters.

When the music stops a decimal number will be shown on the board. If the highlighted digit in this number is in the place value column of the station you chose to stand at, you score a point. Keep track of your own points.

Who will earn the most points?



Place Value Disco



Round 1

Hundredths

90.65

Reveal Number

Place Value Disco



Round 2

Tens

21.74

Reveal Number

Place Value Disco



Round 3

Tenths

15.19

Reveal Number

Place Value Disco



Round 4

Ones

4 **3** . 0 3

Reveal Number

Place Value Disco



Round 4

Tenths

5 4 . 8 0

Reveal Number

Place Value Disco



Round 4

Hundredths

4 1 . 4 4

Reveal Number

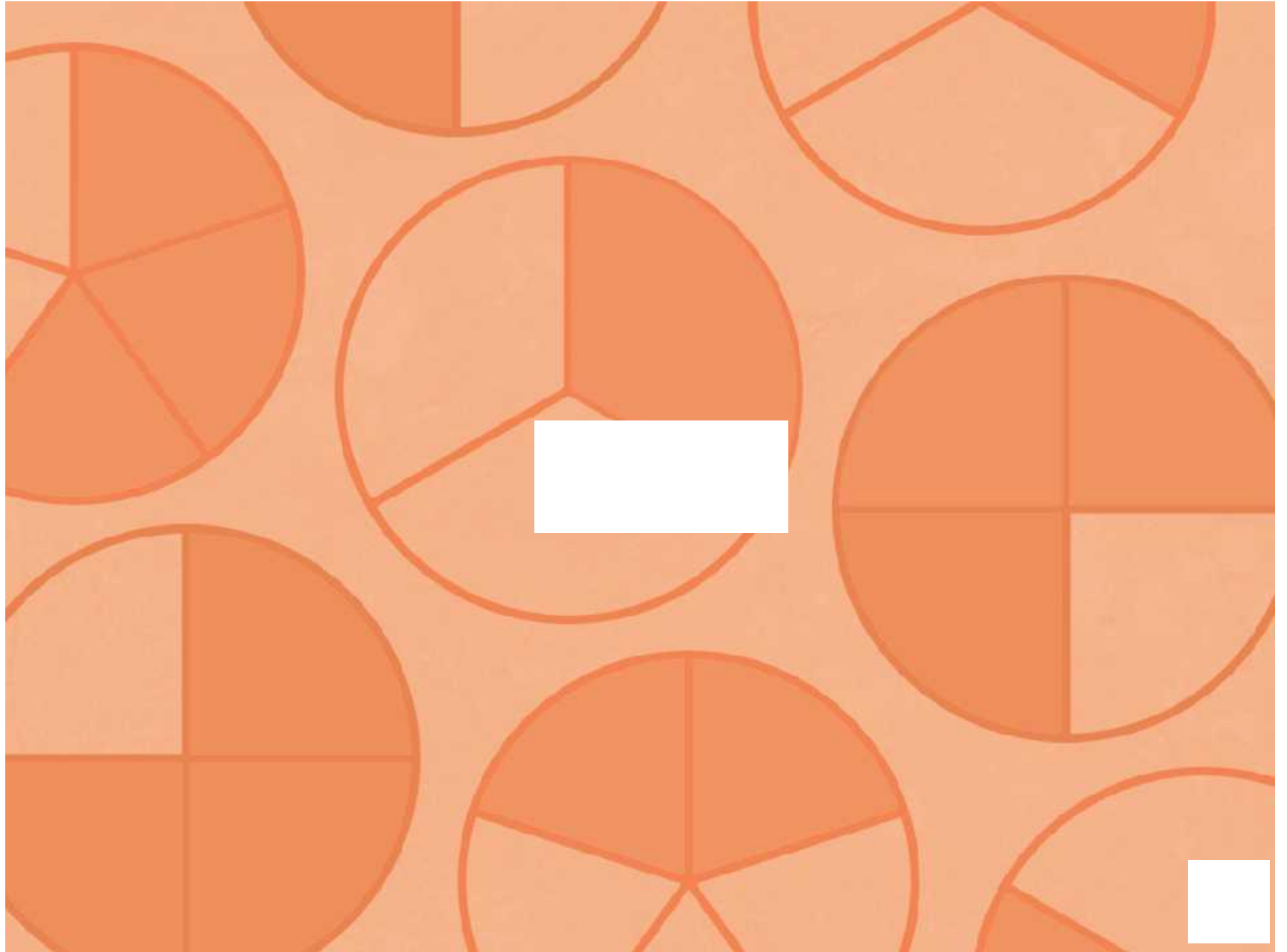
Aim



- I can read and write decimal numbers as fractions.

Success Criteria

- I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.
- I can write a decimal number as a fraction.
- I can use Venn and Carroll diagrams to sort decimal numbers.



Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		

Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		

Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		

Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		

Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		

Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		

Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		

Fractions | Decimal Numbers as Fractions

I can read and write decimal numbers as fractions.		
I can explain the place value position of decimal numbers using the vocabulary of tenths and hundredths.		
I can write a decimal number as a fraction.		
I can use Venn and Carroll diagrams to sort decimal numbers.		