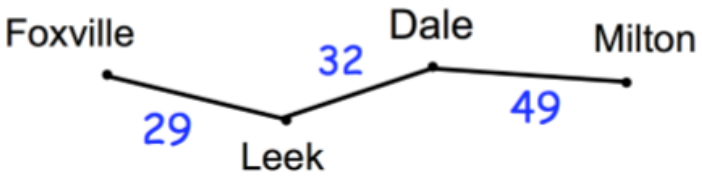
STARTER

1. The distances, in miles, between four towns are shown on the map.



Work out the distance between Foxville and Milton.

2. A television costs £275. Work out the cost of two televisions.

3. Work out the area and perimeter of this rectangle.

4.

Look at the four digit cards. Create the smallest possible two digit odd number. You may only use each card once.

5. Complete the tally chart.

Blue	Blue	Red	Green	White
Blue	White	Red	Red	Red
Red	Red	Green	Blue	

Colour	Tally	Frequency
Blue		
White		
Red		
Green		

Fraction, Decimal and Percentages

- Recognise and calculate equivalences between common fractions, percentages and decimals

Recap

A company sells cars in different regions of the UK. The table shows the number of cars it has sold over the past 6 months. Draw a bar chart to display the information.

	Cars sold
North West	120
North East	140
Midlands	150

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These Fractions, Decimals and Percentages Are All the Same

Learn them

Fractions	Decimals	Percentages
$\frac{1}{2}$	0.5	50%
$\frac{1}{4}$	0.25	25%
$\frac{3}{4}$	0.75	75%
$\frac{1}{5}$	0.2	20%
$\frac{1}{10}$	0.1	10%

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Changing Fractions into Decimals

1. Divide the top number in the fraction by the bottom number.

Examples:

What is $\frac{4}{5}$ as a decimal?

Divide 4 by 5.

4 ÷ 5 = **0.8**

What is $\frac{9}{10}$ as a decimal?

Divide 9 by 10.

9 ÷ 10 = **0.9**

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Changing Fractions into Decimals

2. Second method for trickier fractions when you can't use a calculator.

1. Multiply the top number by 10.
2. Divide by the bottom number.
3. Divide the result by 10.

Example:

What is $\frac{4}{5}$ as a decimal?

1. Multiply the top number by 10: 4 x 10 = 40
2. Divide by the bottom number: 40 ÷ 5 = 8
3. Divide the result by 10: 8 ÷ 10 = **0.8**

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Comparing Fractions, Percentages and Decimals

Examples:

1. Which is greater: 0.5 or $\frac{6}{10}$?

You need to work out what $\frac{6}{10}$ is as a decimal.

To convert $\frac{6}{10}$ to a decimal, divide 6 by 10: 6 ÷ 10 = 0.6

0.6 is bigger than 0.5, so $\frac{6}{10}$ **is greater.**

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Comparing Fractions, Percentages and Decimals

Examples:

1. Jamal is booking a holiday. The travel agent offers Jamal two deals:

"All flights half price" OR "25% of all hotels"

The flights Jamal wants to book normally cost £300.
The hotel he wants to book normally costs £400.
Which offer will save Jamal the most money?

First work out how much money Jamal will save on the flights: $\frac{1}{2}$ x 300 = £150

First work out how much he'll save on the hotel: 25% of 400 = $\frac{25}{100}\ x\ 400 = £100$

The **half price flights** offer will save Jamal the most money.

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Fraction	Decimal	Percentages
	0.3	
		25%
$\frac{4}{10}$		
$\frac{5}{20}$		
	0.45	
	1.23	
		250%

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Practice Questions

1. What is $\frac{1}{20}$ as a decimal? (1 mark)

2. A sale is offering a discount of 25%. What is this as a fraction? (1 mark)

3. Marta buys $1\frac{1}{4}$ kg of cheese. Write $1\frac{1}{4}$ kg as a decimal. (1 mark)

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Practice Questions

4. What is $\frac{3}{5}$ as:

a) a decimal?..... b) a percentage? ..... (2 marks)

5. Bedford County Council sends out a survey. 40 out of 50 people respond.

a) What percentage is this? (1 mark)

b) Milton Keynes County Council sends out a similar survey. 7 out of 10 people respond. Which council has a higher percentage of people responding to their survey?

(2 marks)

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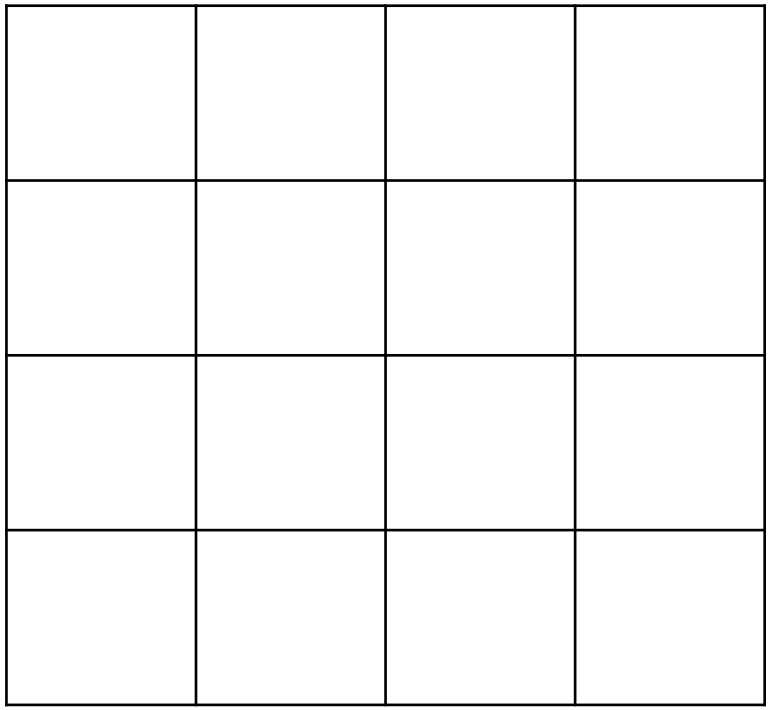
Practice Questions

6. How many sixteenths are there in $\frac{3}{4}$?

You may use this grid to help you.



(1 mark)

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Practice Questions

7. There are 40 sweets in a bag.

Ben eats $\frac{1}{8}$ of the 40 sweets

Jerry eats 20% of the 40 sweets

What fraction of the sweets do Ben and Jerry eat altogether?

(3 marks)