Maths SATs 2025.

Key dates…

- **Monday 12th May 2025:** Spelling, punctuation, and grammar (Grammar/Punctuation Test) – 45 minutes.

- **Monday 12th May 2025:** (Spelling Test) – 20 minutes.

- **Tuesday 13th May 2025:** Reading Paper (English) – 60 minutes.

- **Wednesday 14th May 2025:** Maths Paper 1 (Arithmetic) – 30 minutes.

- **Wednesday 14th May 2025:** Maths Paper 2 (Reasoning) – 40 minutes.

- **Thursday 15th May 2025:** Maths Paper 3 (Reasoning) – 40 minutes.

KS2 Maths SATs papers analysis (2024)
Percentage of questions by content domain

Number & Place Value - 10%
Calculations - 35%
FDP - 26%
Ratio & Proportion - 6%
Algebra - 3%
Measurement - 8%
Shapes - 7%
Pos & direction - 2%
Statistics - 3%
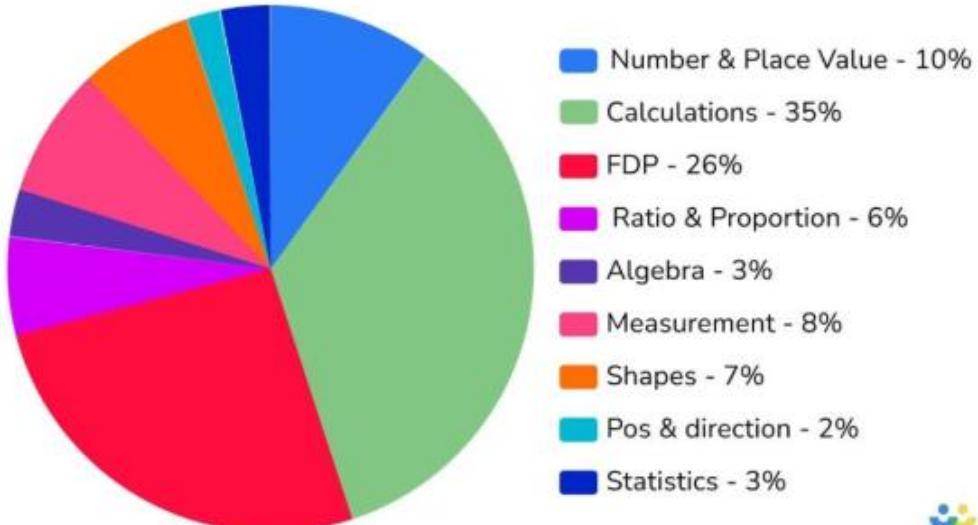
KS2 Maths SATS papers analysis (2024)
Percentage of questions by content domain

Content domain	2018	2019	2022	2023	2024
Number & PV	11	9	9	11	10
Calculations	32	30	38	32	35
FDP	27	24	23	26	26
Ratio & prop	7	8	8	7	6
Algebra	6	6	3	4	3
Measurement	8	9	7	8	8
Shapes	5	7	6	5	7
Pos & direction	2	3	2	2	2
Statistics	2	4	3	4	3

SATs breakdown…

WHAT CAN THIS ANALYSIS TELL US?

SATs breakdown…

WHAT CAN THIS ANALYSIS TELL US?

Paper 1 - Arithmetic	2022	2023	2024
Year 3	6%	11%	8%
Year 4	31%	25%	28%
Year 5	17%	22%	19%
Year 6	47%	42%	44%

Paper 2 - Reasoning	2022	2023	2024
Year 3	7%	7%	15%
Year 4	22%	24%	19%
Year 5	30%	45%	19%
Year 6	41%	24%	48%

Paper 3 - Reasoning	2022	2023	2024
Year 3	13%	19%	12%
Year 4	13%	8%	15%
Year 5	58%	31%	19%
Year 6	17%	42%	54%

Core aims of the national curriculum…

- Fluency.
- Problem solving.
- Reasoning.

Fluency is the easiest one for you to help your child develop at home.

- Arithmetic paper. 36 questions in 30 minutes.
- Problems that can be solved mentally must be solved quickly and efficiently.
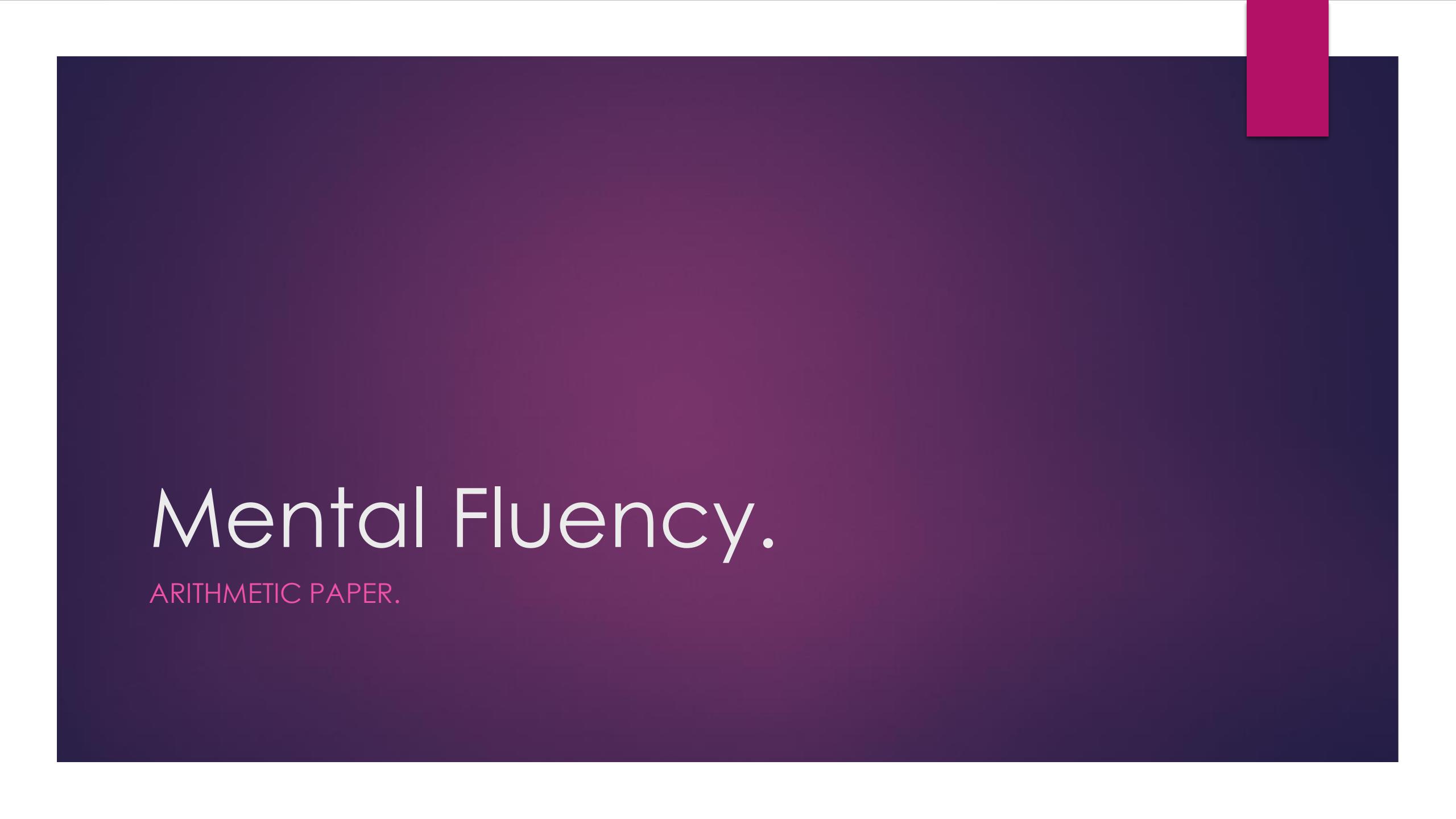
Mental Fluency.

ARITHMETIC PAPER.

Place value knowledge…

- It's important for children to be able to calculate these questions mentally and at speed. (Time Saving)

- Look for opportunities to explore numbers.
- What is 1000 more than…?
- What number minus 10/100/1000 would give me that number?
- What happens if I times/divide… by 10/100/1000?

Quick fire questions on the way to school.
Looking at numbers in shops, ingredients, road signs, youtube hits etc

$40 + 1,000 =$

$\boxed{} = 4,500 + 600$

$\boxed{} - 100 = 1,059$

$0.04 \div 10 =$

$2,345 \times 1,000 =$

Related addition and subtraction facts...

▶ **Partitioning numbers to add/subtract quickly.**

I can partition 707 into 700 and 7. I can add my 700 first then my 7.

How could I quickly add...?

$707 + 1,818 =$

▶ **Numbers bonds knowledge.** Children should be able to apply this knowledge for all numbers to 20, 50, 100 and related numbers. E.g. I know 14- 6 =8 so 34 tens – 6 tens = 28

How many different ways can I make 28?

How many more to make 50? 100?

I know that 5 and 12 make 17 so

1700 – 500 = 1200

$345 - 60 =$

$46 + 304 =$

▶ **Compensation methods**

What is a quick way of subtracting 9, 99, 999 etc.?

e.g. 122,456 – 11,999 subtract 12000 and then add one.

$468 - 9 =$

$122,456 - 11,999 =$

Fractions…

Steps to Success – Fraction of an amount

¾ of 16

Step 1

Draw a whole number. This is the show the full amount so in the example, the bar represents 16. Draw another bar underneath and using the denominator, split the bar into this amount. Colour in the number the numerator says.
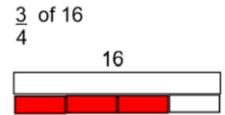
Step 2

Divide the whole number by the denominator (numbers on the bottom of the fraction. You can use your times table knowledge or a formal method.

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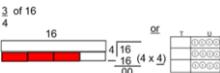
Step 3

Once you have found what one part of the bar is worth, times this by the numerator (number on the top of the bar). So ¾ of 16 = 12
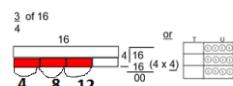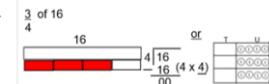
Steps to success- multiplying fraction by fraction.

Example-

$$\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$$
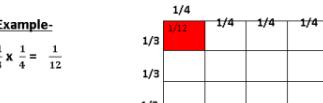
To find a 1/3 of something you split/break/divide it into 3.
To find a ¼ of something you split/break/divide it into 4.
Consider the vocabulary to help you understand the visual representation.

You also can solve this by doing 1 x 1 = 1 (this is your numerator) then 3 x 4 = 12 (this is your denominator). Always remember to simplify your fractions to their lowest form.

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$$\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$$

Supporting Mathematics

Home >> Parents >> Useful Information >> Supporting Mathematics

Look at these useful documents to support your child at home with different methods of calculation.

- Addition Expanded Column method.pdf
- Division Bar Model.pdf
- Grid Method Multiplication.pdf
- Short Mulitplication.pdf
- Subtraction Expanded Column method.pdf
- Year 6 arithmetic strategies and support.pdf

Times table fluency…

- All division facts related to 12 x12 to be able to be recalled in a random order.
- All associated facts to be recalled fluently.

I know that 132 is 11 x 12 so I know that 110 x 12 =1320 therefore 1320 divided by 12 = 110 (Lots of our children try to use a formal strategy to solve this).

I know 3 x 4 = 12 so 30 x 40= 1200

Quick fire associated fact questions would help children with this.

Because I know 30 x 8 and 3 x 8 I can solve this without a formal method.

$72 \div 9 =$

$1{,}320 \div 12 =$

$30 \times 40 =$

$8 \times 33 =$

Times table fluency for fractions- factors and multiples...

- You have to have a deep understanding of multiplication and division facts to solve these as they all require knowledge of multiples, particularly common multiples, and factors.

- A common multiple of 4, 5 and 10 is 20 so if I find equivalent fractions with a denominator of 20 I can easily add them together.

- 6 and 8 are both factors of 24 so I can use this knowledge to make equivalent fractions with 24 as the denominator.

- What times tables is ... in? What are the factors of...?

IS ... a multiple of ...?

$$\frac{1}{4} + \frac{1}{5} + \frac{1}{10} =$$

$$2\frac{1}{3} + \frac{5}{6} =$$

$$\frac{2}{6} - \frac{1}{8} =$$

$$\frac{3}{4} - \frac{3}{8} =$$

$$\frac{4}{6} \times \frac{3}{5} =$$

$$1\frac{1}{2} \times 57 =$$
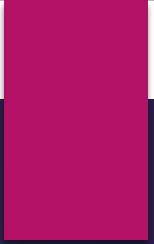
MATHS – REASONING PAPER REAL LIFE EXPERIENCES.

KS2 Reasoning Tests…

▶ Children are asked to answer about 20 questions in 40 minutes for each of the two Reasoning Papers.

▶ The questions cover all areas of mathematics from the 2014 national curriculum that would be regarded as reasoning.

▶ The questions in the test are based on objectives from all of the KS2 national curriculum. Last year, nearly 55% of the questions were based in the Y6 curriculum.

▶ The questions are written in a variety of styles.

▶ The children mainly struggle with working out what is required for them to do rather than the actual calculations.

How you can help at home...

▶ I want to show you what the questions look like but more importantly show you all the things that you could do at home to support the thinking involved within them.

▶ Hopefully, these will all be easy things for your family to get involved in and will fit in with everyday life experiences. Some of them are practical so the children might not even notice that you are sneakily building on their knowledge at the same time.

Listen to your child explaining something they have learnt in mathematics – this may help them understand even better.

The number system…

Asking your children place value questions:
Which is smaller/ larger?
Which is closest/ furthest away?
How much bigger/smaller?
Putting numbers in order from smallest to largest.
Looking at numbers that are similar to each other and making comparisons.
Putting numbers in sequences – looking for patterns.
Games of making the biggest number – using cards or dice. Who made the largest? By how much? Who has made the closest number to …?

1 The numbers in this sequence increase by 14 each time.

Write the missing numbers.

| | 82 | 96 | | 124 | 138 | |

Ali puts these five numbers in their correct places on a number line.

511   499   502   555   455

Write the number **closest** to 500

Write the number **furthest** from 500

Working with large numbers…

In Year 6, we work with large numbers up to 10 million.
Looking at these numbers in a context really helps:
Ordering house prices – Choose 5 favourite houses on Zoopla - differences
Estimating and Rounding (spectators or audience)Football match , Music Gig – How many spectators are there? How many more to reach full capacity? Cost.
How many cars in a car park, space on an aeroplane? Youtube hits– rounding
Comparing
How much bigger/smaller – by how much?

2

A £135,300
B £119,125
C £130,500
D £131,500
E £91,500
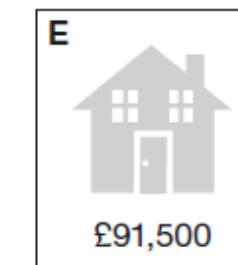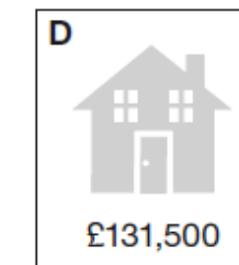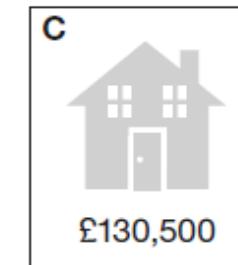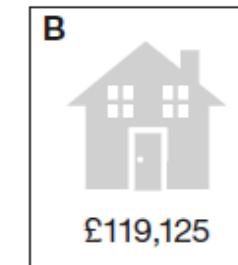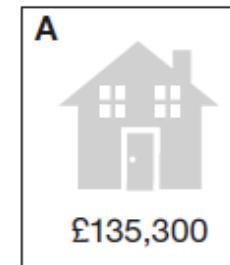
Put these houses in order of price starting with the **lowest price**.

One has been done for you.

Reading Tables and Charts

▶ Practical experience of reading a variety of different tables and charts can be really useful.

▶ This can help the children interpret the table.

▶ Generate questions, ordering, comparing, adding, total, difference

▶ What questions could you ask from using the table opposite?

▶ Interpret information linked to children's interest

4   This table shows the number of people living in various towns in England.

Town	Population
Bedford	82,448
Carlton	48,493
Dover	34,087
Formby	24,478
Telford	166,640

Bus and train timetables...

Maybe something we don't do that often but really useful to look at are bus and train timetables (online versions). Children often don't understand how to read them and how this relates to journey time.
Ask questions:
How long will it take to reach?
Are any buses/trains quicker, why?
Do they always stop at all of the stations?
Which bus/train do you need to catch to be somewhere at a particular time – what's the last train you can catch, why?

9 Here is part of the bus timetable from Riverdale to Mott Haven.

Riverdale	10:02	10:12	10:31	10:48
Kingsbridge	10:11	10:21	10:38	10:55
Fordham	10:28	10:38	10:54	11:11
Tremont	10:36	10:44	11:00	11:17
Mott Haven	10:53	11:01	11:17	11:34

How many minutes does it take the 10:31 bus from Riverdale to reach Mott Haven?

minutes

Mr Evans is at Fordham at 10:30

What is the **earliest** time he can reach Tremont on the bus?

What do you know about a number?

Regular practice of vocabulary:

- Prime numbers.
- Even and odd - car number plates.
- Square numbers.
- Multiples.
- Factors.
- Again looking for patterns really helps.

5 Write each number in its correct place on the diagram.

16   17   18   19
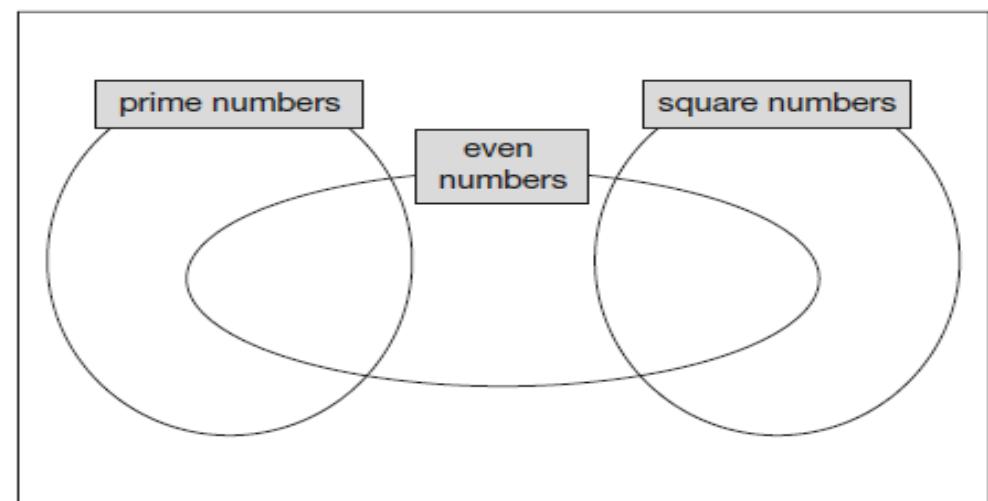
Measurement and Conversions – Weight…

When the children are helping out in the kitchen give them practical experience of weighing items. Can they estimate how heavy they think an item might be?

Can they find different items that weigh a total of 1kg? How many grams is this?

Regular practice of **converting** between grams and kilograms. If a packet of cereal weighs 1.2kg – how much would this be in grams? Look at labels in the kitchen - add together, order items.

Making a cake is great for looking at the different weights for each ingredient. What if I wanted to make a bigger, smaller (doubling and halving) or more cakes?

11 A packet contains 1.5 kg of oats.

oats

1.5kg
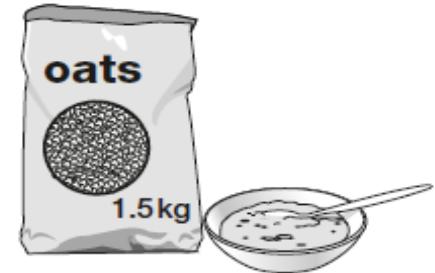
Every day Maria uses 50 g of oats to make porridge.

How many days does the packet of oats last?

Show your method

days

Measurement and Conversions - Length

Again conversion is the key – being really confident at changing centimetres to metres and metres to kilometres and vice versa (mm too).
An understanding that all units need to be the same to help solve a problem – change everything into metres or into centimetres depending on relevance to problem.
Practical measuring – comparing, ordering.
Journeys – great way to discuss distance – which is further?
By how many km?
Road signs might be in miles but good for comparisons too.

6 Jacob cuts **4** metres of ribbon into **three** pieces.

The length of the first piece is **1.28** metres.

The length of the second piece is **1.65** metres.

Work out the length of the third piece.

Show your method

_____ metres
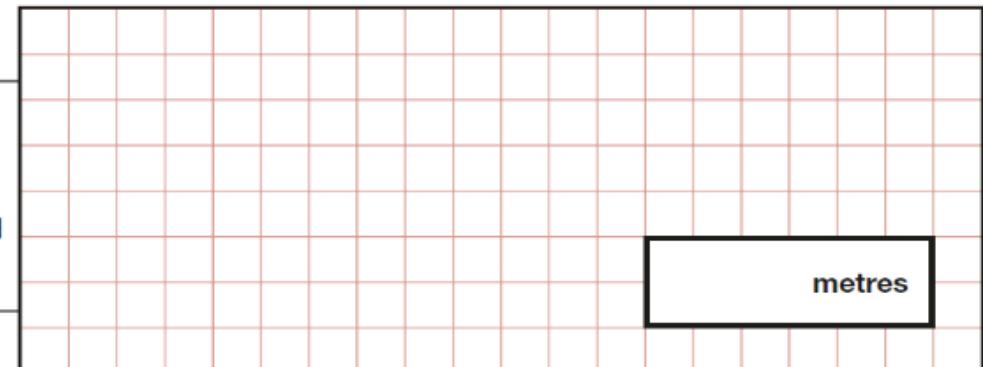
Telling the time...

Another important life skill.
Comparisons between analogue and digital
12 hour and 24 hour clock
Ask the children to tell you the time.
Position of different types near each other to compare e.g kitchen wall clock analogue – oven is digital. Refer to them. Discussion if its 3.45 – how many minutes until 4.00? Look at one clock before the other can they change 24 hour digital to analogue.
If the cake needs 45 minutes to bake – what time do I need to take it out of the oven?

3 A clock shows this time twice a day.
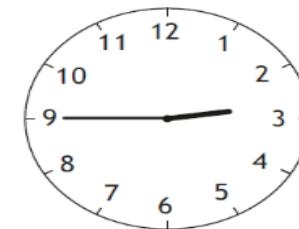
Tick the two digital clocks that show this time.

03:45	02:45	09:45

21:45	14:45

Money and shopping…

Working out the cost of some shopping – can even do this online.
Cheaper items in the shop or spending pocket money – will they have enough? Using coins – multi – step problems.
Rounding to nearest pound
Adding and Subtracting amounts mentally

8 Olivia buys three packets of nuts.

She pays with a **£2 coin**.

This is her change.

What is the cost of **one** packet of nuts?

Other resources…

- CGP

'Maths Moment'

▶ There is always an opportunity for a 'Maths Moment' at home.

▶ Hopefully your children will find these fun and these little things will do a lot to boost their confidence too.

▶ Board games can be great for developing a child's maths skills too! Playing these can be a really powerful way for children to become comfortable with our number system, spotting patterns and literally playing with numbers.