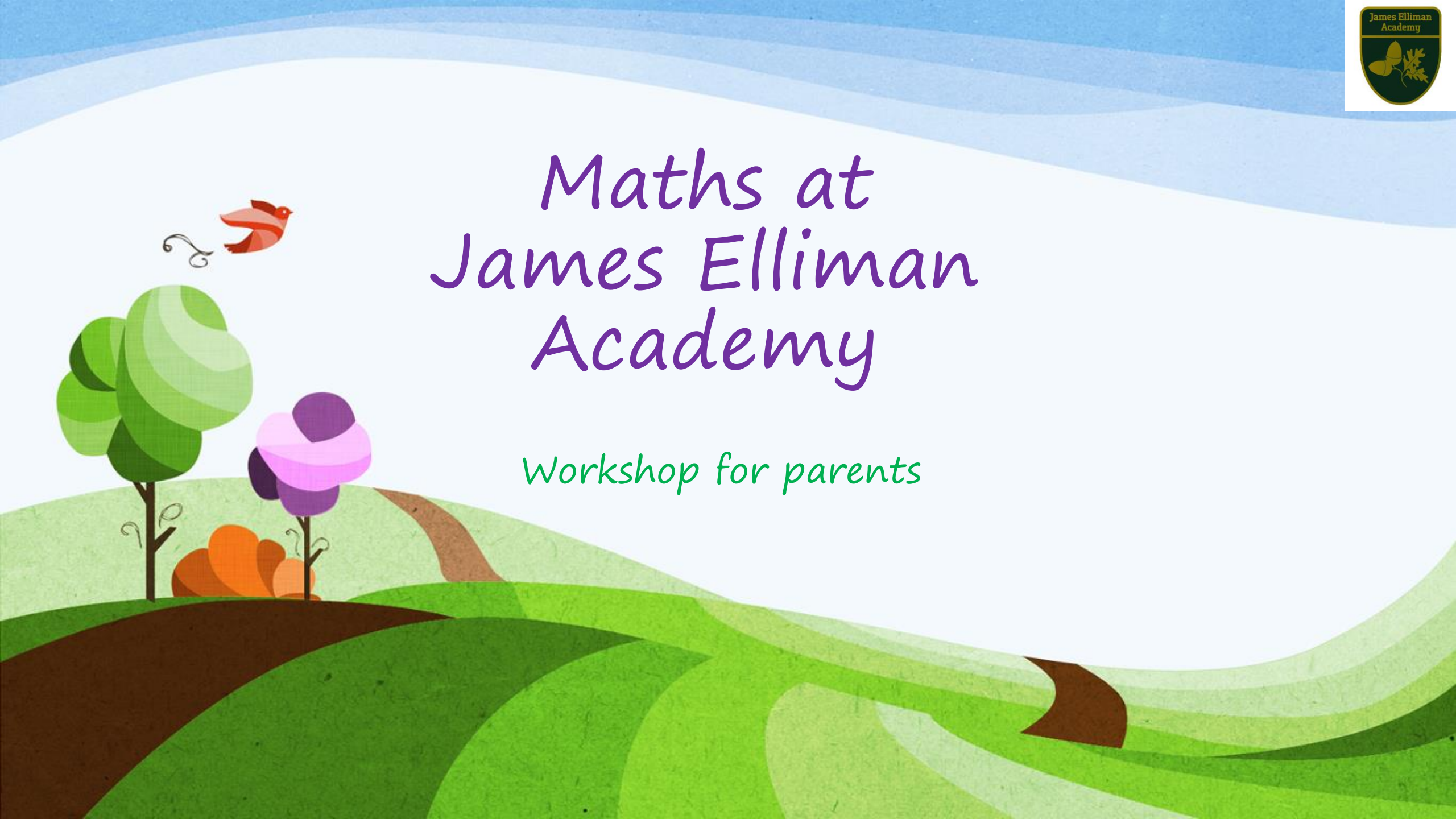
Maths at James Elliman Academy

Workshop for parents



Welcome

- Introductions
- National Curriculum and statutory requirements
- How we teach maths at JEA
- How you can help your child

Subject Leads

At James Elliman Academy, we have people who are specifically responsible for the development of mathematics.

Vanda Devshi– KS1/EYFS

Muzaffer Ali – KS2

What is Maths?

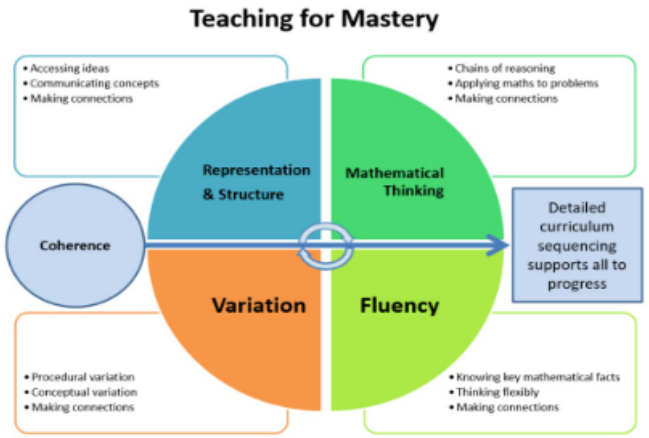
Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems.

It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment.

A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Mastery

A true understanding of these ideas will probably come about only after discussion with other teachers and by exploring how the ideas are reflected in day-to-day maths teaching, but here's a flavour of what lies behind them:



Coherence

Teaching is designed to enable a coherent learning progression through the curriculum, providing access for all pupils to develop a deep and connected understanding of mathematics that they can apply in a range of contexts.

Representation and Structure

Teachers carefully select representations of mathematics to expose mathematical structure. The intention is to support pupils in 'seeing' the mathematics, rather than using the representation as a tool to 'do' the mathematics. These representations become mental images that students can use to think about mathematics, supporting them to achieve a deep understanding of mathematical structures and connections.

Mathematical Thinking

Mathematical thinking is central to how pupils learn mathematics and includes looking for patterns and relationships, making connections, conjecturing, reasoning, and generalising. Pupils should actively engage in mathematical thinking in all lessons, communicating their ideas using precise mathematical language.

Fluency

Efficient, accurate recall of key number facts and procedures is essential for fluency, freeing pupils' minds to think deeply about concepts and problems, but fluency demands more than this. It requires pupils to have the flexibility to move between different contexts and representations of mathematics, to recognise relationships and make connections, and to choose appropriate methods and strategies to solve problems.

Variation

The purpose of variation is to draw closer attention to a key feature of a mathematical concept or structure through varying some elements while keeping others constant.

Maths at JEA?

Her Majesty's Chief Inspector for OFSTED, Amanda Spielman, said:

Mathematics is an integral part of every school curriculum. It is a foundation of many disciplines and a source of interest and enjoyment in itself. It also unlocks the door to further study and employment in a vast range of fields.

- English pupils, on average, gain higher attainment in maths than pupils in many other countries, and mathematics continues to be the most popular subject to study at A level. However, the attainment gap between the lowest and highest achievers is wider than average. Likewise, disadvantaged pupils in England are much less likely to achieve a grade 4 at GCSE, or to meet the expected standards at the end of the early years foundation stage (EYFS), or at key stages 1 and 2.

What is taught in maths lessons?

- Number – counting, writing, place value
- Addition and subtraction
- Multiplication and division
- Fractions, decimals and percentages
- Measurement – length, height, weight, volume, time, money, dates, weeks, months and years
- Shape
- Position and direction
- Yr 2 onwards – statistics
- Yr 6 Ratio and proportion
- Yr 6 Algebra

The link below will take you to the programmes of study for each year group. This shows you what your child will be learning when at school and what a child of that age is expected to achieve by the end of the year (Age Related Expectations).

National Curriculum Programmes of Study for Key Stage 1 and Key Stage 2

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Value	Resilience	Integrity	Democracy	Creativity	Gratitude	Diversity
Key Events	Black History Month (October) Mental Health Day Harvest Festival Show Racism the Red Card	Remembrance Day Anti-bullying Week World Kindness Day	Safer Internet Day	World Book Day	Coronation of King Charles	Sports Week Science week at JEA

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Units Covered	**Getting to know you-** Opportunities for settling in, introducing the area of provision and getting to know the children. **Just like me!-**Match and sort, compare amounts. Compare size, mass and capacity. Exploring pattern **It's Me 1, 2, 3!-**Representing 1, 2, 3 and comparing 1, 2, 3. Composition of 1, 2, 3. Circles and triangles. Positional lang. **Light and dark-**Representing numbers to 5, one more one less. Shapes with 4 sides. Time **Alive in 5-** Introducing zero, Comparing numbers to 5.Composition of 4 and 5. Compare mass and capacity. **Growing 6, 7, 8-**Making pairs 6, 7, 8. Combining 2 groups. Length and height, time **Building 9 & 10-**Comparing numbers to 10. Number bonds to 10. 3D shapes & Pattern **On The Move Superhero to 20 and beyond-** Exploring patterns, Exploring more complex patterns, Addition & Subtraction – Adding more & Take away, Number & place Value – Counting to 20 **First Then Now ,Find my pattern-** Numerical patterns - doubling, Halving & sharing & Odds & Evens, Measures – length, Height & distance, Weight & Capacity	place value within 10 add/sub within 10 shape place value within 20 add/sub within 20 place value within 50 multiples of 2,5 and 10length,height, weight, volume mult/division of 2,5 and 10 fractions position and direction place value within 100 money time	Numbers to 100 Place Value Addition and Subtraction Money Multiplication of 2, 5 and 10 Multi and Divi of 2, 5 and 10 Statistics Shape Fractions Length & height Position & direction Problem solving Time Capacity & temperature Problem Solving	Place Value Addition and Subtraction Time table Money Multiplication Division Measurement-money count and convert Statistics Scaling Properties of shape Measurement-Mass and capacity Fractions Length & perimeter Statistic Capacity, mass Consolidation Problem solving Time	Place Value Addition and Subtraction Measurement-length and perimeter Multiplication and Division Measurement-Area Fractions Decimals Consolidation Measurement-money, time Statistic Properties of shape, position, direction Consolidation	Place Value Ordering, Comparing Writing in words and digits Roman numerals Addition and Subtraction to a million Statistics Multiplication and Division Multiples, factors, prime numbers, squares, cubes Multiplication and Division/short and long divide with remainders Fractions Decimals and Percentages Properties of shape Position, direction Converting Volume	Securing number facts counting, Partitioning and calculating. understanding and Using place Value Long and short multiplication using formal method Fractions, decimals and percentages Ratio and Proportion Calculating with money and time Statistics Analysing data Calculating mean as an average Area and Perimeter Naming and transforming shapes Angles and Degrees Coordinates Algebra
Counting	•Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0. Counts objects, actions and sounds. Counts out up to 10 objects from a larger group. • Verbally count beyond 20, recognising the pattern of the counting system;	•count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number •count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	•count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	•count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.	•count in multiples of 6, 7, 9, 25 and 1000 •find 1000 more or less than a given number count backwards through zero to include negative numbers	•count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 •interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	•use negative numbers in context, and calculate intervals across zero
Place Value	• Uses number names and symbols when comparing numbers, showing interest in large numbers. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less		•recognise the place value of each digit in a two-digit number •compare and order numbers from 0 up to 100; use <, > and = signs	•recognise the place value of each digit in a three-digit number •compare and order numbers up to 1000	•recognise the place value of each digit in a four-digit number •order and compare numbers beyond 1000 •round any number to the nearest 10, 100 or 1000	•read, write, order and compare numbers up to 1 000 000 and determine the value of each digit •round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	•read, write, order and compare numbers up to 10 000 000 and determine the value of each digit •round any whole number to a required degree of accuracy

What does Maths learning look like at James Elliman?

- Our curriculum is based on the national curriculum and White Rose Maths and other materials that support the delivery of the curriculum.
- These are used across EYFS, KS1 and KS2 allowing children to be exposed to a variety of different types of learning and to ensure coverage of fluency, problem solving and reasoning in different formats to ensure that our maths curriculum is rich and varied.

White Rose

Year: Year 2 (New schemes) | Term: 3 options selected | FILTER | CLEAR FILTERS

These are our NEW schemes of learning
You are viewing version 3.0 of our schemes of learning.

KEY CHANGES | VIEW VERSION 2.0

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number: Place value (VIEW)				Number: Addition and subtraction (VIEW)					Geometry: Shape (VIEW)		
Spring term	Measurement: Money (VIEW)				Number: Multiplication and division (VIEW)				Measurement: Length and height (VIEW)	Measurement: Mass, capacity and temperature (VIEW)		
Summer term	Number: Fractions (VIEW)				Measurement: Time (VIEW)			Statistics (VIEW)		Geometry: Position and direction (VIEW)		Consolidation

Supporting materials

Resources | Assessments | Full term schemes | Guidance | Activities

Barvember

Problems of the day

Parent resources

IWB files

Digital tools

EYFS

Reception – Autumn Phase 1 – Match & Sort

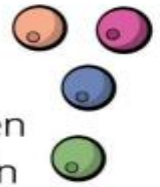
Sort

Home Corner

This offers many opportunities for children to sort. Can they sort the plates, bowls, cups and cutlery by colour? Can they sort them by type? How could they sort the food? Can they find more than one way? Add a variety of socks for the children to sort and a washing line to peg them onto in sets.

Finger Gym

Provide a large collection of beads in different colours, shapes, sizes etc and several small pots. Encourage the children to sort the beads into the pots and explain how they have sorted them.



Enhancements to areas of learning

Loose Parts

Provide a collection of loose parts – buttons are ideal and encourage the children to sort these in different ways. For example they could sort by material, shape, colour, texture. The Button Box by Margarette S Reid is an excellent starting point.

Blocks

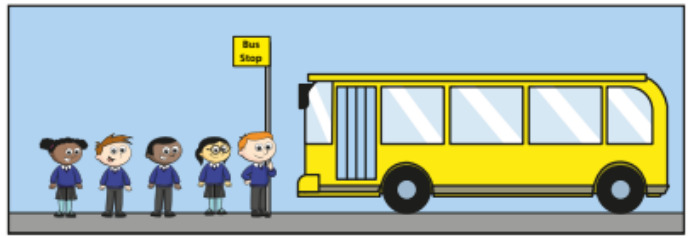
Children can use a number of characteristics and attributes to sort blocks in the construction area. Using words such as: stack, roll, shape, large, small etc will prepare them for their future learning on 3D shapes too.

KS1 Year 1

Add by counting on within 20

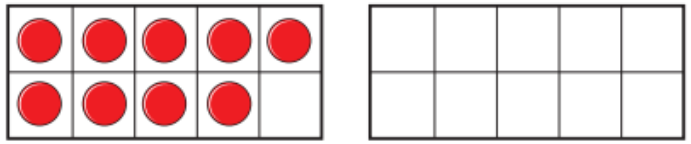
1 First, there are 9 children on the bus.

Then, 5 more children get on the bus.



How many children are on the bus now?

Complete the ten frames and the sentences.



☐ + ☐ = ☐

Now, there are ☐ children on the bus.

2 Sam has 12 sweets.

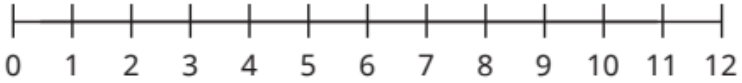
Max gives her 3 more sweets.

How many sweets does Sam have now?

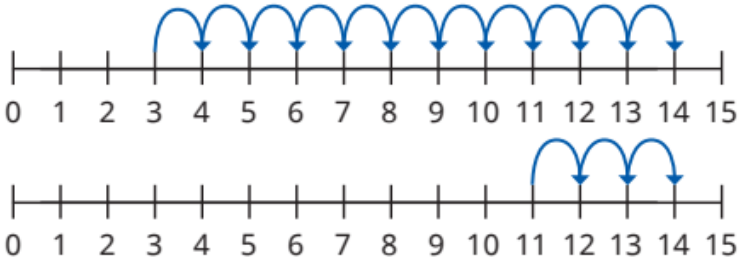
3 Kim has 7 coins.

Ron gives her 4 more coins.

How many coins does Kim have now?



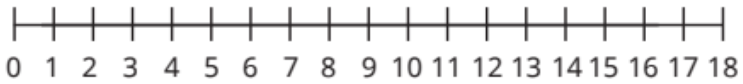
4 Each number line shows 3 + 11



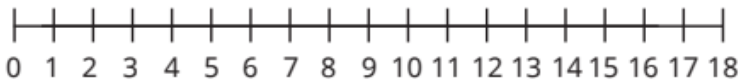
What is the same and what is different?

Use the number lines to work out the additions.

a) 2 + 13



b) 4 + 9



Year 2

Bonds to 10

1 Ron and Sam have each got some cubes.

a) Here are Ron's cubes.

How many blue cubes has Ron got?

How many white cubes has Ron got?

How many cubes has Ron got altogether?

b) Here are Sam's cubes.

How many blue cubes has Sam got?

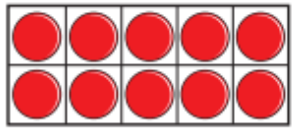
How many white cubes has Sam got?

How many cubes has Sam got altogether?

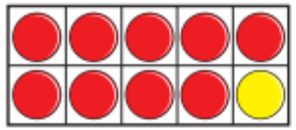
What is the same about their cubes?

What is different?

2 Kim is finding bonds to 10 using counters and a ten frame.



10 + 0 = 10



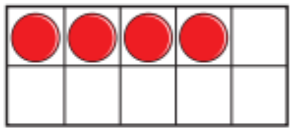
9 + 1 = 10

a) Use counters to continue Kim's pattern.

Write a number sentence to match your counters.

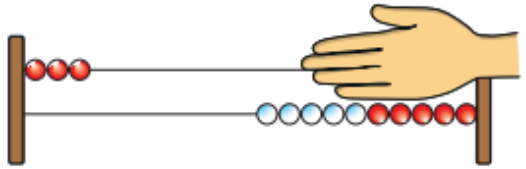
b) Continue the pattern to find other number bonds to 10

3 Mo puts some counters on a ten frame.



How many more counters does he need to fill the ten frame?

4 Here is a Rekenrek.



How many beads is the hand covering?

5 Complete the number sentences.

a) 10 = ☐ + 2

b) ☐ + 9 = 10

c) 3 + ☐ = 10

d) 10 = ☐ + 0

Year 2 SATS

As soon as the word 'exam' pops up particularly for 6-7 year olds, it can set off anxiety. **Think of Key Stage 1 SATs as evaluations rather than exams** – they're not designed to be passed or failed, and they gauge what level your child has reached rather than whether or not they meet the standards set in the test. It's another way to highlight where your child is doing well, and where they might need extra help.

These will take place from WB May 15th up until May 26th.

Year 2 SATS

Paper 1 arithmetic

1 $3 + 7 =$ ☐

1 mark

2 $100 - 1 =$ ☐

1 mark

Paper 2 reasoning

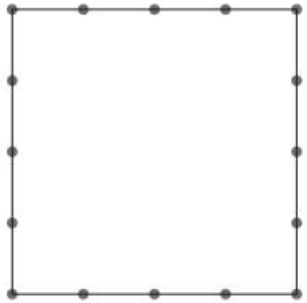
8 Kemi has **25** red beads and **6** green beads.

How many beads does Kemi have **altogether**?

☐ beads

1 mark

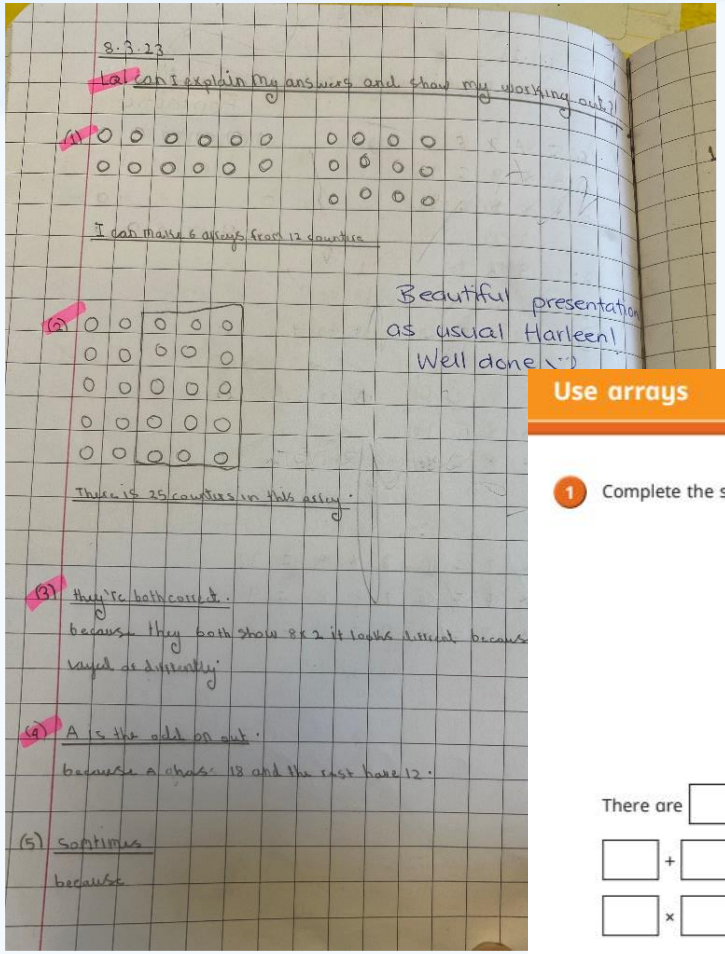
9 Draw **two lines** to divide the square into **quarters**.

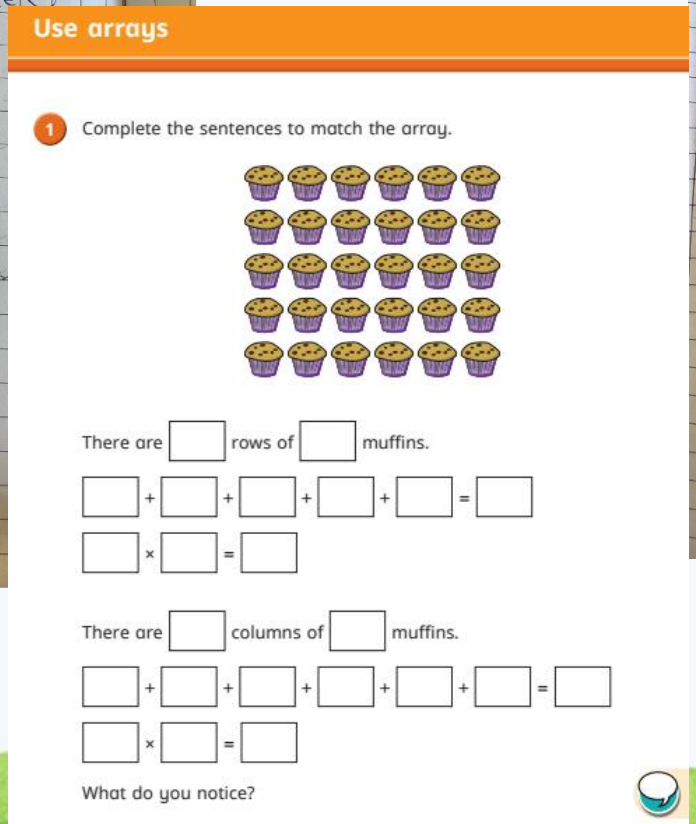


1 mark

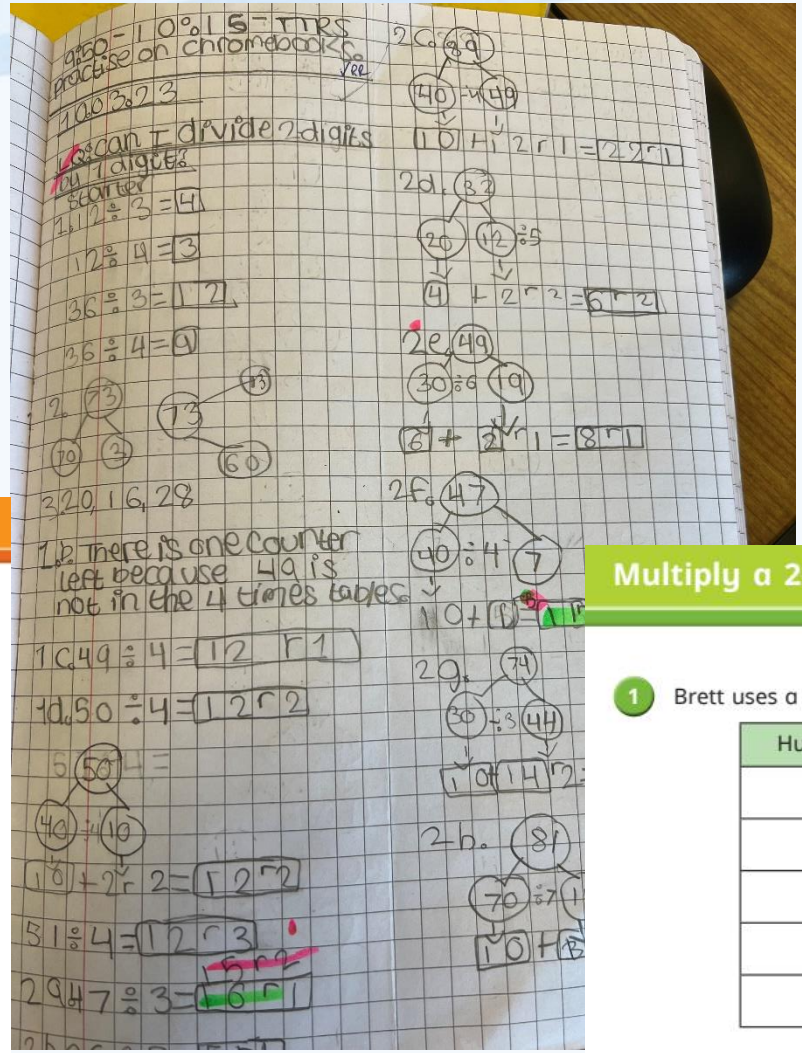
KS2

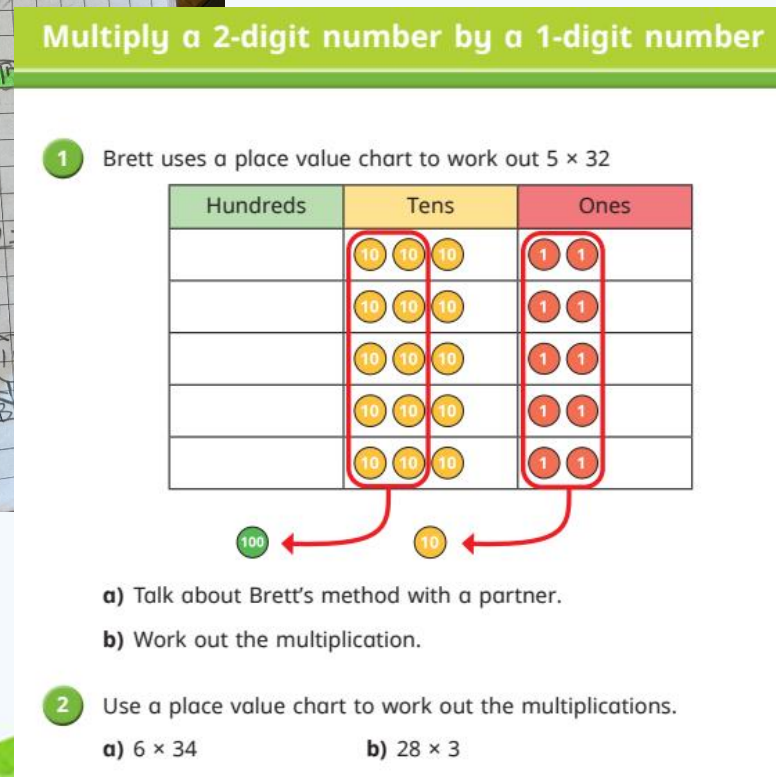
Year 3





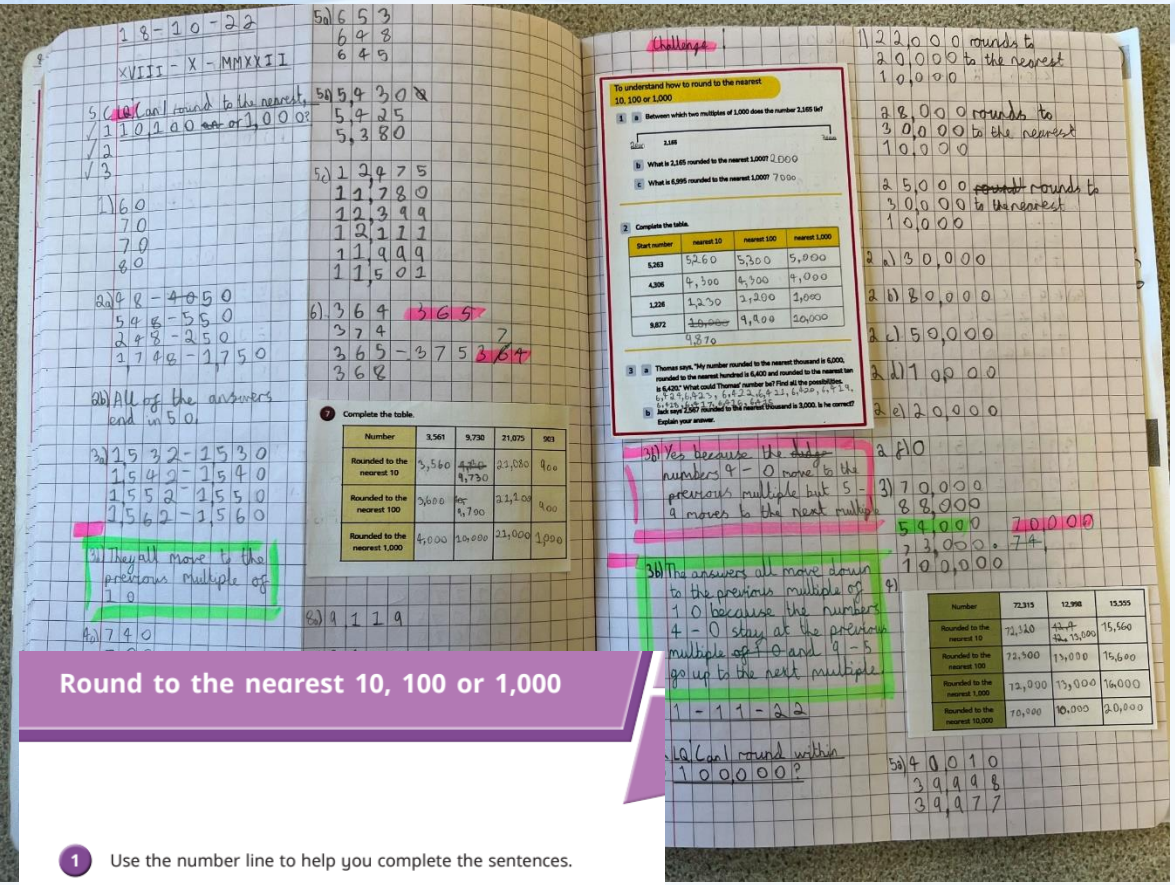
Year 4



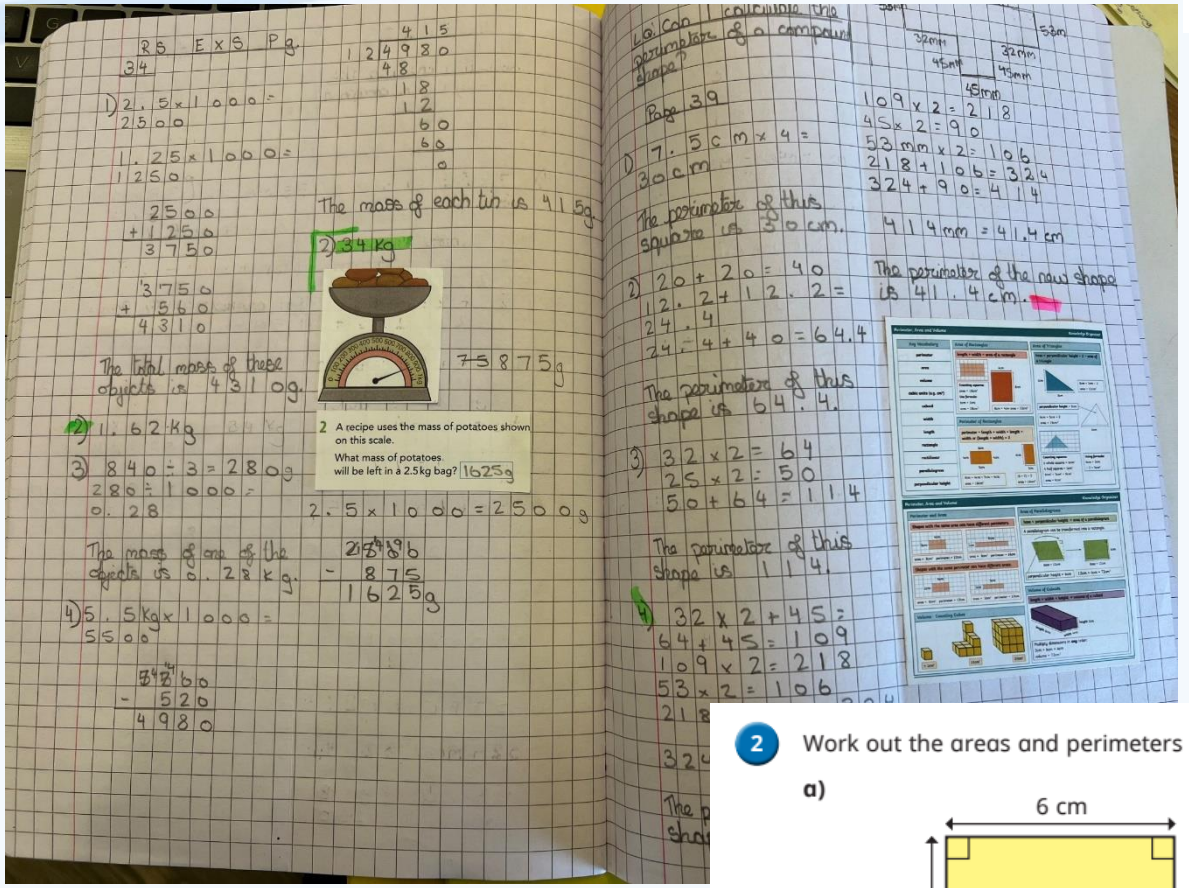


KS2

Year 5

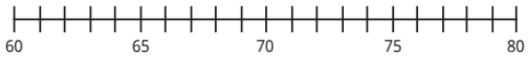


Year 6



Round to the nearest 10, 100 or 1,000

1 Use the number line to help you complete the sentences.



63 rounds to ☐ to the nearest 10

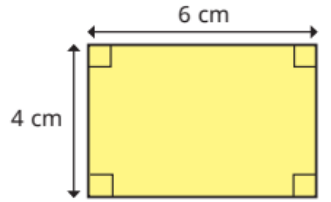
74 rounds to ☐ to the nearest 10

67 rounds to ☐ to the nearest 10

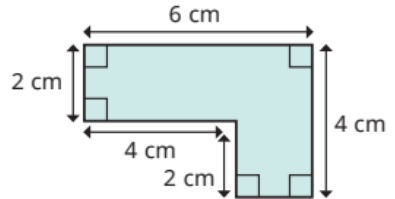
78 rounds to ☐ to the nearest 10

2 Work out the areas and perimeters of the shapes.

a)



b)

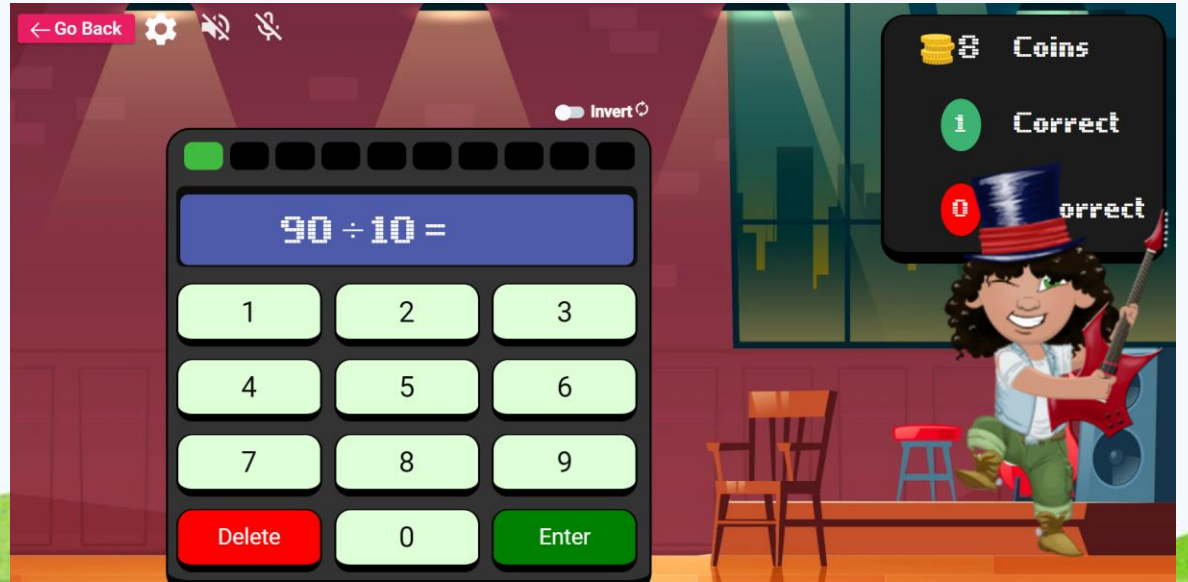


Year 4 Multiplication Tables Check (MTC)

The multiplication tables check (MTC) is statutory for all year 4 pupils. The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided.

These will take place between June 5th and 16th.

Year 4 have been using Times Tables Rock Stars as essential practise.



Year 6 SATS

Children will sit the following SATs papers:

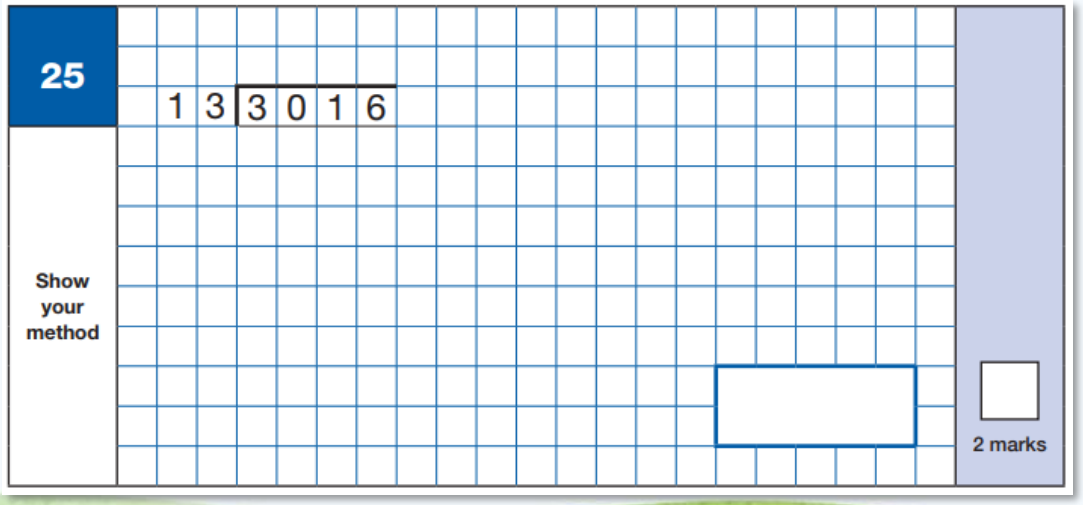
- Grammar, Punctuation and Spelling (Paper 1)
- Grammar, Punctuation and Spelling (Paper 2)
- Reading
- Maths Paper 1 (Arithmetic)
- Maths Paper 2 (Reasoning)
- Maths Paper 3 (Reasoning)

Year 6 SATS

Maths Paper 1 (Arithmetic)

It has a standard timing of **30 minutes** and is worth a total of **40 marks**.

It covers the **four operations** (division, multiplication, addition, subtraction and mixed operation calculations requiring **BIDMAS**), as well as **number properties**, calculating **percentages of amounts**, calculations using **decimals**, and calculations using **fractions**.

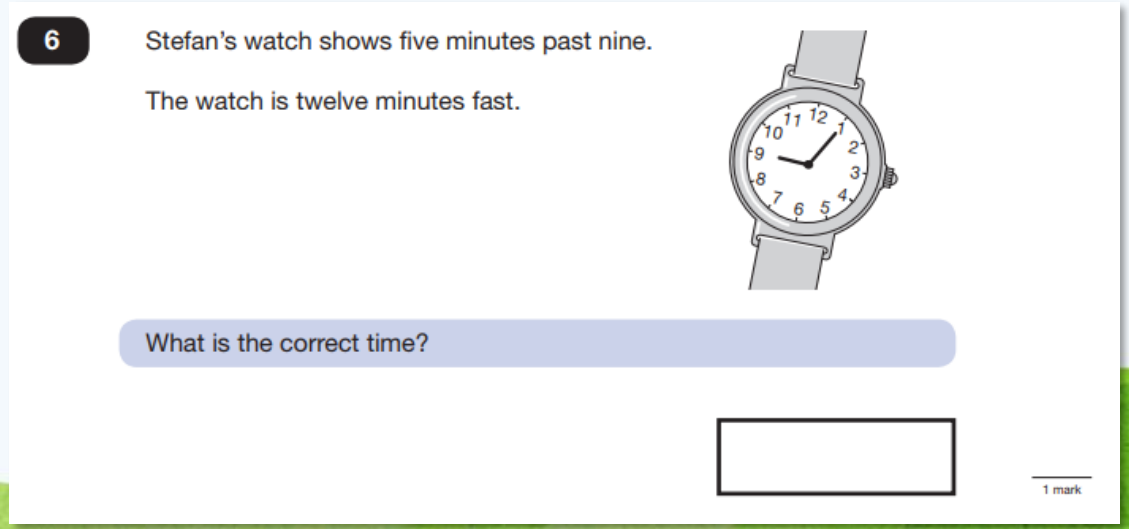


Year 6 SATS

Maths Papers 2 & 3 (Reasoning)

Both have standard timings of **40 minutes** and are worth **35 marks** each. Paper 2 requires children to demonstrate their mathematical knowledge and skills, as well as their ability to solve problems and their mathematical reasoning.

Questions focus on the following Mathematical topic areas:
- Number and place value– including Roman Numerals;
- Addition, subtraction, multiplication and division (calculations);
- Geometry – properties of shapes;
- Geometry – position and direction;
- Statistics;
- Measurement – including length, perimeter, mass (weight), volume, time and money;
- Algebra;
- Ratio and proportion;
- Fractions, decimals and percentages.



6 Stefan's watch shows five minutes past nine.

The watch is twelve minutes fast.

What is the correct time?

1 mark

How you can help!

- Maths progression sheet on website
- TTRS https://ttrockstars.com/
- Homework
- Maths in the real world
- White Rose https://whiterosemaths.com/parent-resources

Be positive about maths. Try not to say things like "I can't do maths" or "I hated maths at school" – your child may start to think like that themselves.

Point out the maths in everyday life. Include your child in activities involving numbers and measuring, such as shopping, cooking and travelling.

Praise your child for effort rather than for being "clever". This shows them that by working hard, they can always improve.

Questions?