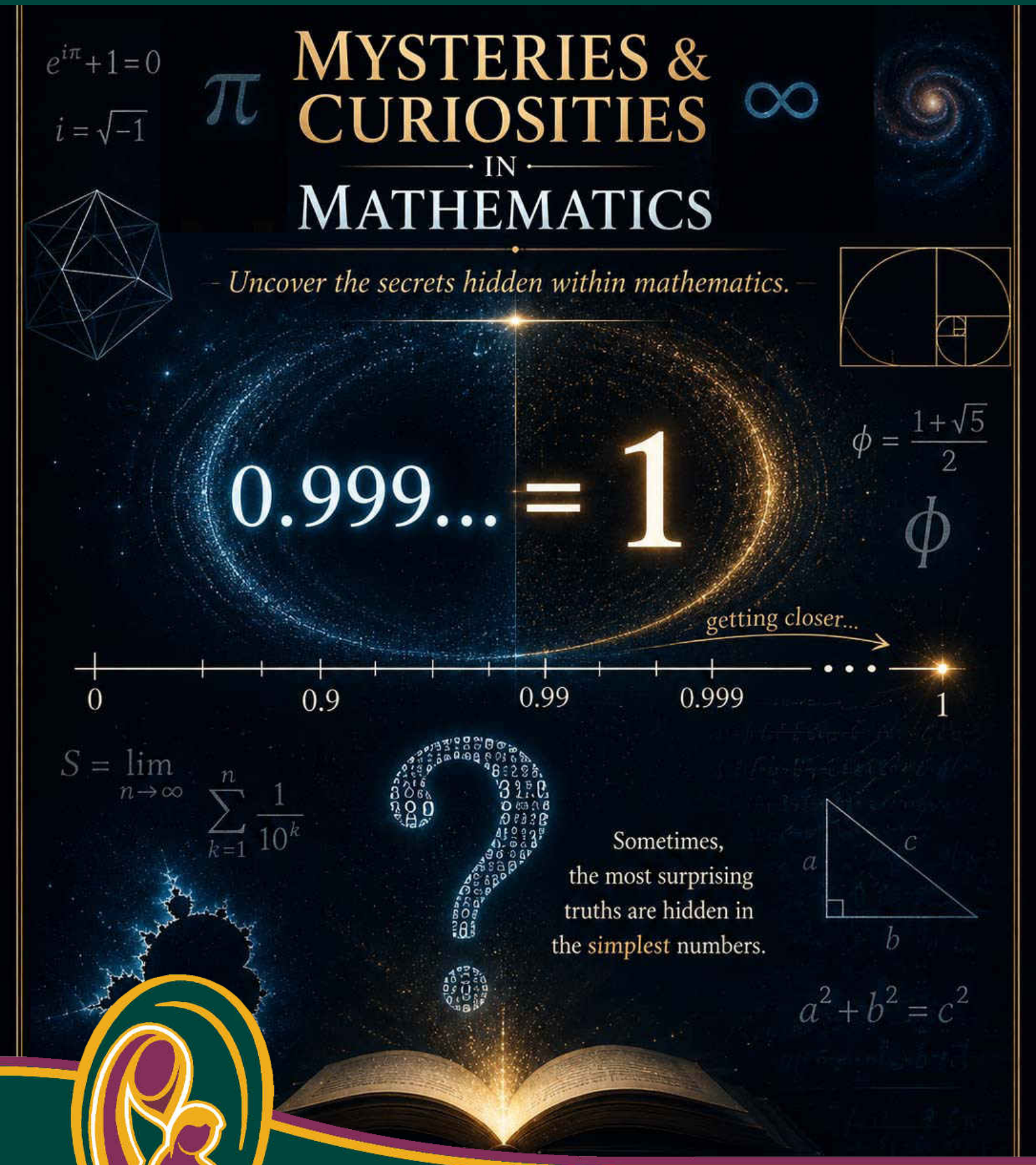
'Act justly, love tenderly, walk humbly with your God'



ST. ANNE'S CATHOLIC HIGH SCHOOL

MATHEMATICAL CURIOSITY

THE MATHEMATICS DEPARTMENT NEWSLETTER

JUNE 2026

INTRODUCTION

Have you ever wondered if numbers could hide secrets? Or why some patterns in maths seem almost too perfect to be real?

Welcome to a world where maths is more than just equations and homework — it's full of puzzles, surprises and mysteries that even experts are still trying to solve. From strange number tricks that feel like magic, to unsolved problems like the Riemann Hypothesis, mathematics is full of questions waiting to be explored.

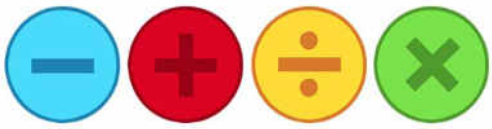
Among other things in this issue of ***Mathematical Curiosity***, you will find:

- **Visual Proof that 0.999... = 1**
- **Number Patterns *(sequence)***
- **Brain Teasing Questions**
- **Solving Sudoku Puzzles**

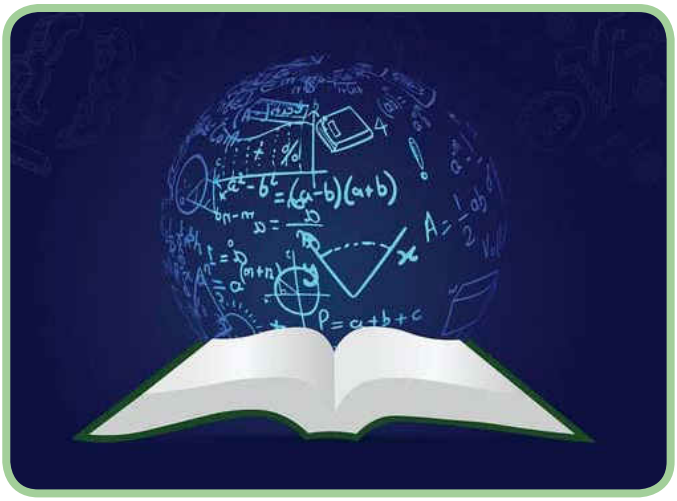
Whether you enjoy solving problems or just love learning something new, this magazine will show you that maths isn't just about getting the right answer — it's about asking interesting questions.

So, join the Mathematics Department as we explore, question, and discover the wonders of maths — where curiosity is always rewarded.

The Mathematics Team



IN THIS EXCITING ISSUE...



FUN FACTS & ADVICE
MATHS STAFF MEMBERS SHARE INSIGHTS

"After university, I chose accountancy as my career path. I left to purse a teaching career and have not regretted it!" **MRS. GREWAL**

"I've been supporting Liverpool Football Club since I was at primary school." **MR. STEPHENS**

"My teachers made a difference in my life, so knowing that I could impact children's lives positively was a drive for me." **MRS. MUSEKIWA**

"My goal is to make Maths engaging and accessible for every student, and to help build confidence and develop critical skills." **MR. SSEBATTA**

"Maths is like reggae — feel the rhythm and everything makes sense. Greatness grows where confidence is planted." **MS. CALDER**

"In class, we don't use NEGATIVES like "I CAN'T". Instead we encourage POSITIVES like "I CAN DO IT"." **MRS. REID**

"Making mistakes is crucial — it's how we discover what we don't know." **MR. THORPE**

"I love to sing, even though I know it isn't my strongest skill — knowing this inspires my belief that every child can learn." **MISS SIMPSON**

"I love being part of a student's learning journey." **MRS. NYAKPENU**

JUNIOR MATHS CHALLENGE
THE RESULTS

The Maths Department would like to congratulate and thank the thirty Year 8 students and twenty Year 7 students from St. Anne's who took part in the UK Maths Trust's *Junior Maths Challenge* in April 2026.

The competition was a great success, with outstanding results across both year groups. Of the 20 Year 7 students who participated, 16 received certificates. In Year 8, an impressive 29 students achieved certificates.

Special recognition goes to the top-performing students from each year group. Melin of Year 7 achieved a creditable score of 74 marks, thereby earning a Silver certificate. In Year 8, Hannah scored an exceptional 86 marks and was awarded a Gold certificate, while Philomena also achieved a Gold certificate with a fantastic score of 83. Please see the table below for further details.

The Maths department is incredibly proud of all the students who took part. They represented St. Anne's, their year groups and themselves so exceptionally well.

Certificates Awarded: Year 7	Certificates Awarded: Year 8
SILVER BIY — 1	GOLD BIS — 1
SILVER — 2	GOLD — 1
BRONZE — 5	SILVER — 5
PARTICIPATION — 8	BRONZE — 6
	PARTICIPATION — 16

United Kingdom Mathematics Trust

BIY ("Best In Year"): *Awarded to the student who achieved the highest score out of all participating students in their specific year group (e.g., Year 7 or Year 8);*

BIS ("Best In School"): *Awarded to the student who achieved the highest score out of all participating students in their entire school.*

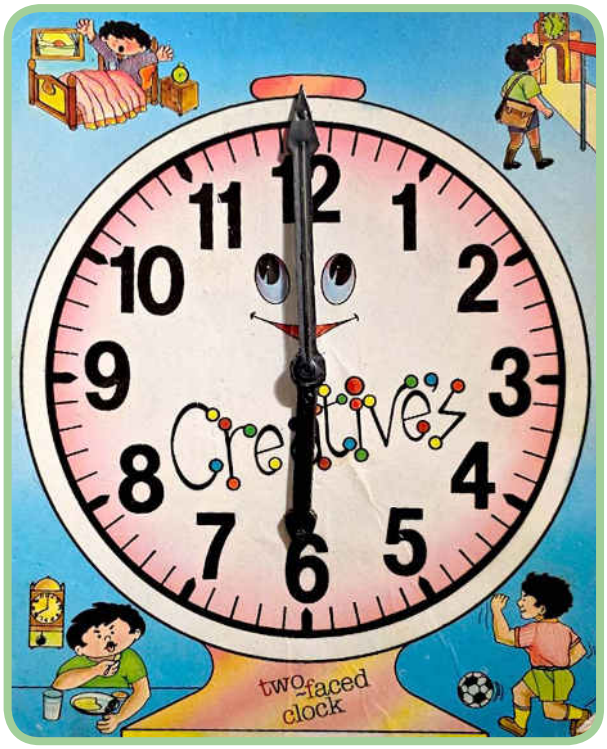
ANALOGUE CLOCKS
READING & UNDERSTANDING TIME

Some of our students have been learning how to read and understand time using analogue clocks. To support their learning, students were tasked with creating their own clocks to use during classroom activities alongside their teachers.

This hands-on activity helped students develop a better understanding of reading the time, including identifying the hour and minute hands and telling the time accurately. Students found the activity engaging, interactive and enjoyable, increasing their confidence and participation during lessons.

SAMANTHA SHOWING OFF HER CREATIVE CLOCK

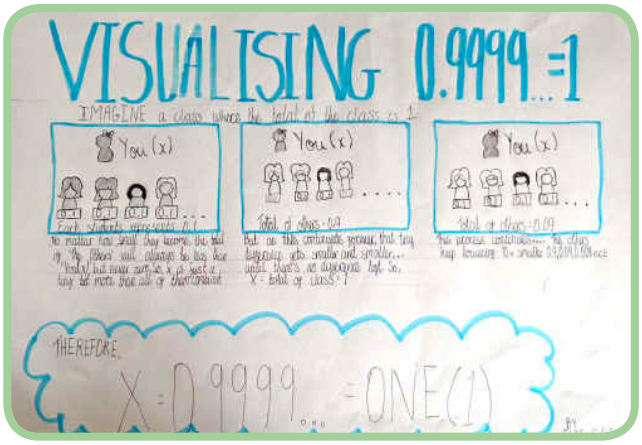
DANIELLA AND MAAME WITH THEIR CLOCKS

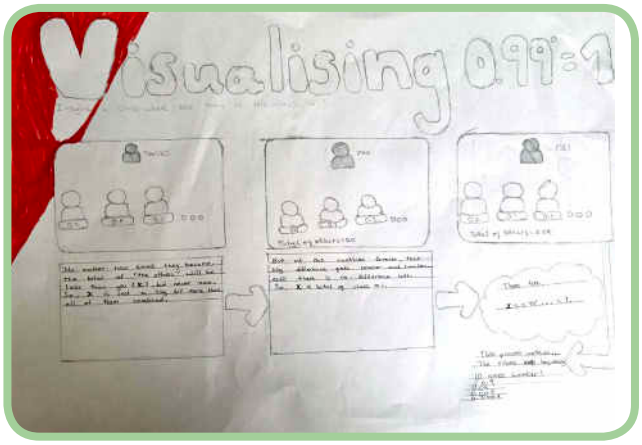


PROVING THAT 0.999... = 1

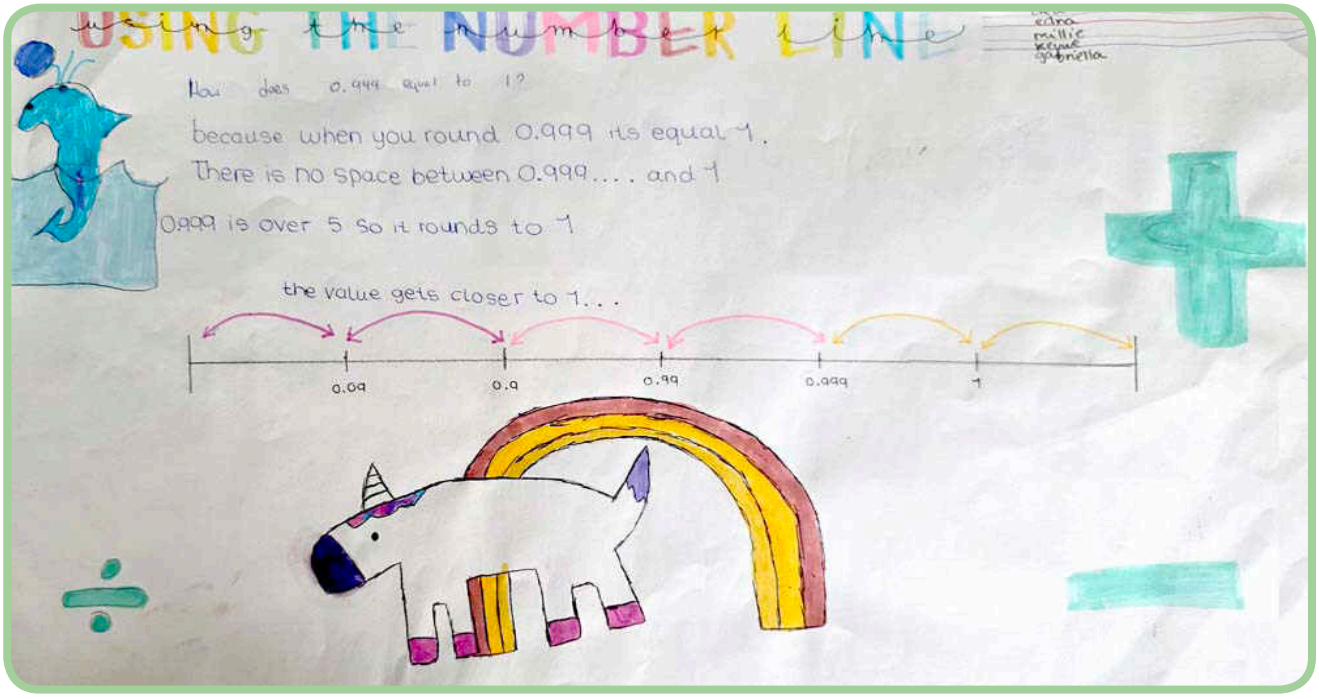
Students from different year groups were given this project to explore a concept that, at first glance, appears surprising: that 0.999.... = 1. While it may seem that 0.999... is slightly less than 1, mathematics shows otherwise. To investigate this idea, the task was approached in different ways across three year groups, with each group focusing on a specific method of understanding the result.

Year 7 students explored a **visual representation**, using a classroom model to demonstrate how values combine and approach a total of 1. This helped build an intuitive understanding of how 0.999... can represent a complete whole.

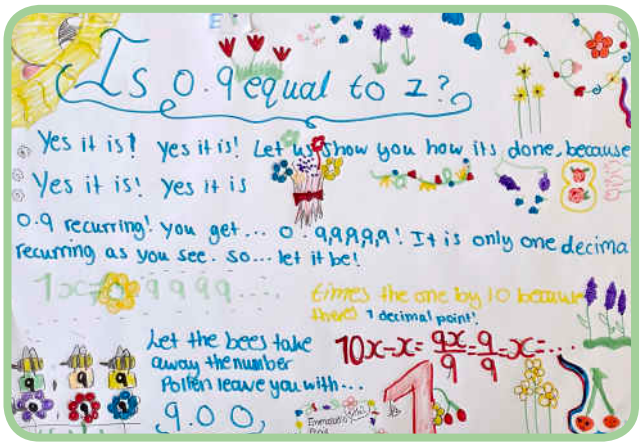




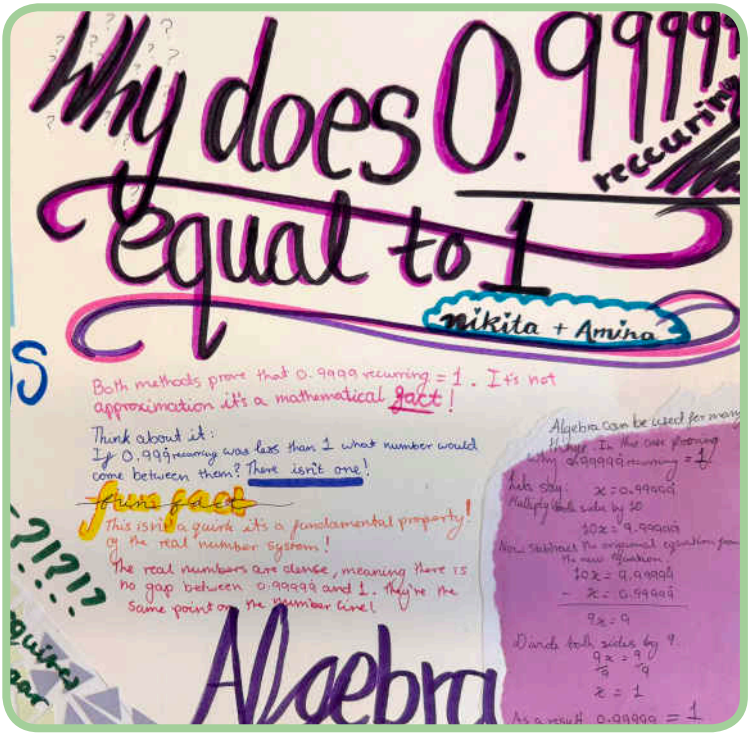
Year 8 students examined the concept using a **number line**, observing how the values 0.9, 0.99, 0.999, 0.9999, 0.99999, 0.999999 and so on, get increasingly closer to 1, leaving no gap between them and 1.



Year 9 students then constructed a **formal algebraic proof** using recurring decimals, demonstrating mathematically that 0.999... = 1, following the method they have learnt in class



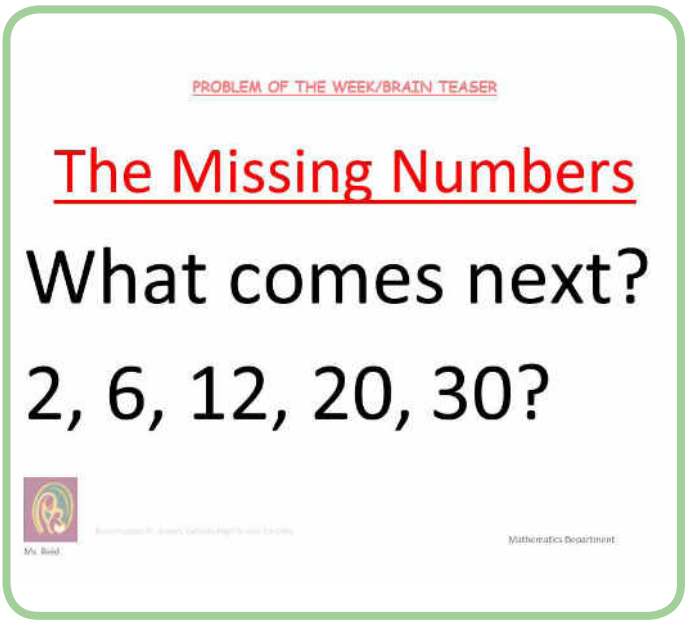
By combining visual, graphical and algebraic approaches, this project demonstrated that although the result may seem surprising, it is logically consistent and mathematically correct.

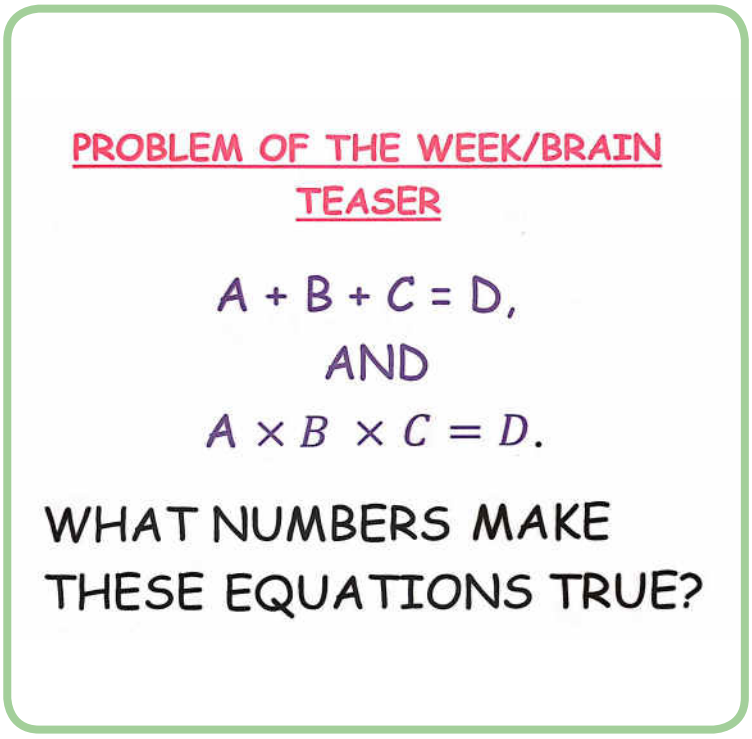


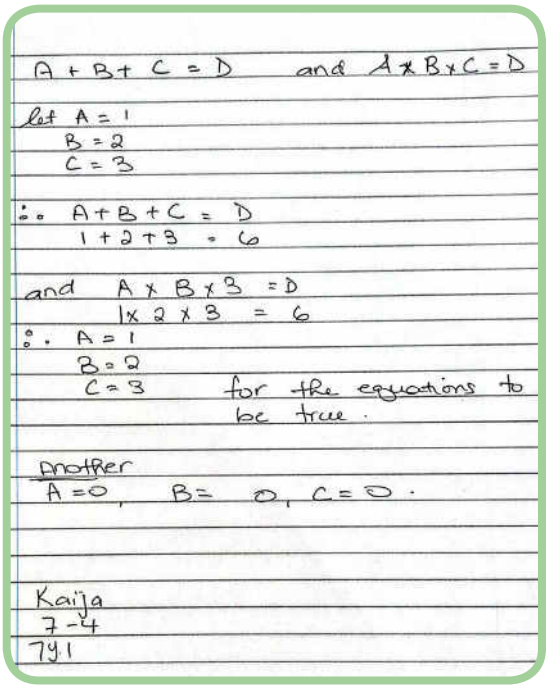
BRAIN-TEASING QUESTIONS
GET THINKING FOR THE SUMMER TERM!

Alongside the initiative led by Mrs. Reid, who has been placing questions around the school to encourage curiosity and engagement, a new set of questions has been introduced for the summer term. As we focus on numbers this term, the questions below were suggested by Mrs. Reid as a fun and interactive way for students to engage with mathematics. With the warmer weather, this approach was intended to make learning even more enjoyable and to encourage participation both inside and outside the classroom.

Feedback from students has been very positive. Many students reported that they enjoyed the challenge of completing the questions and found them engaging and accessible. They especially appreciated being able to work through the problems at their own pace and in different areas of the school, which made the activity feel more like a game than a traditional classroom task. Overall, the responses showed that the initiative successfully increased enthusiasm for number work and helped to build confidence in mathematics.





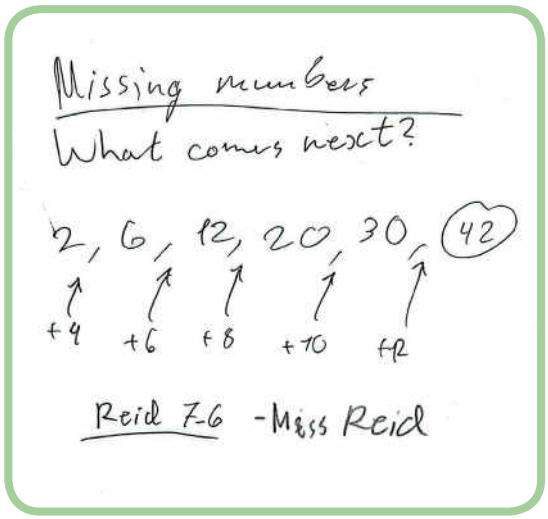


KAIJA 7-4 ANSWERS THE QUESTION!

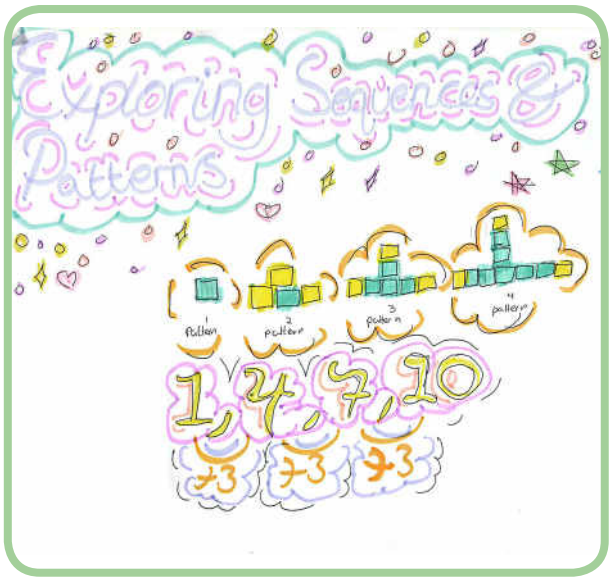
EXPLORING SEQUENCES & PATTERNS

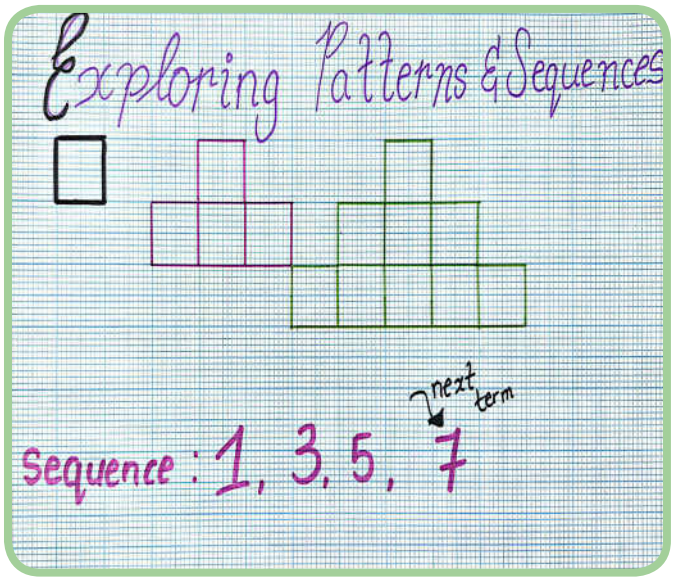
This term, Year 7 students explored sequences and patterns, becoming pattern and sequence detectives as they explored the 'missing numbers' from the Problem of the Week. From spotting hidden rules to predicting the next numbers in a sequence, the classroom was buzzing with curiosity and teamwork.

Students then took on the challenge of creating their own unique patterns, using colours, shapes and numbers. It was an energetic lesson full of creativity, problem-solving and mathematical thinking.



REID 7-6 WORKED OUT HER ANSWER AND PRODUCED A VIBRANT SEQUENCES & PATTERNS SHEET

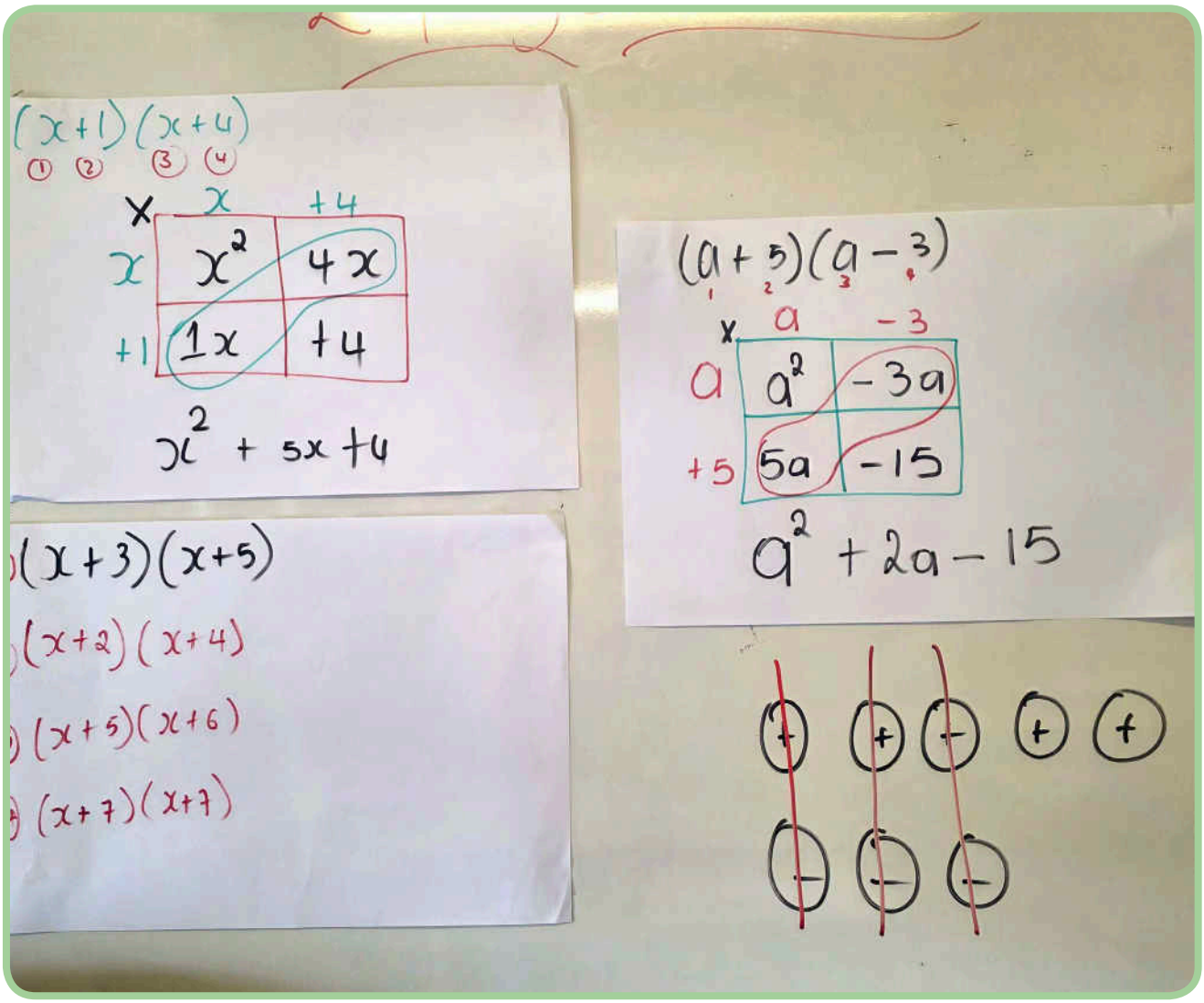




EXPANDING DOUBLE BRACKETS
STEPS TO BETTER UNDERSTANDING

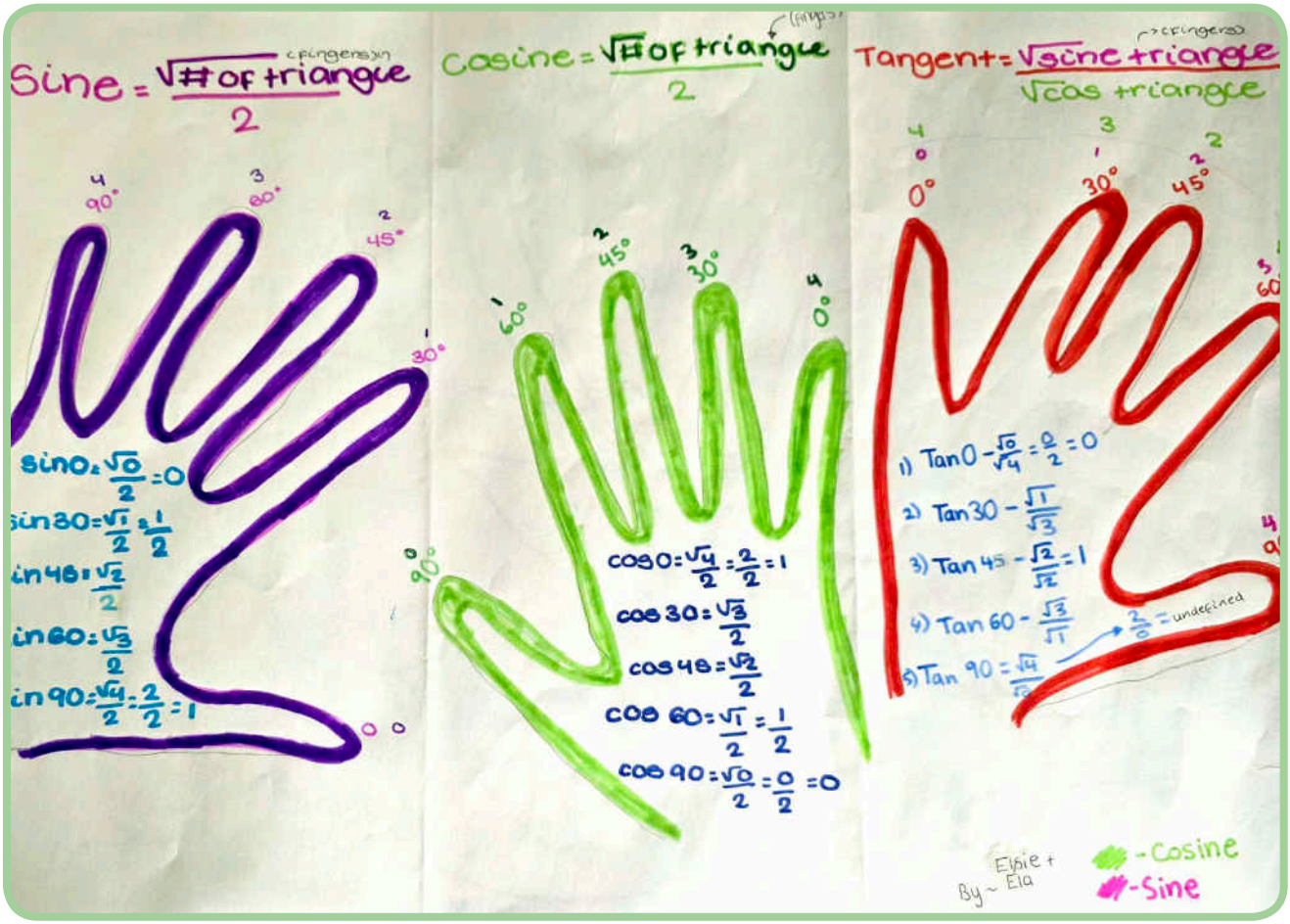
Students have recently been taught how to expand double brackets using the grid method, the objective being to help them break down and organise their work clearly.

During the lesson, Miss Simpson introduced the idea of using A3 paper, so that students had more space to set out their grids and calculations neatly. This visual and hands-on approach allowed students to work through each step confidently and identify how each term is multiplied correctly.

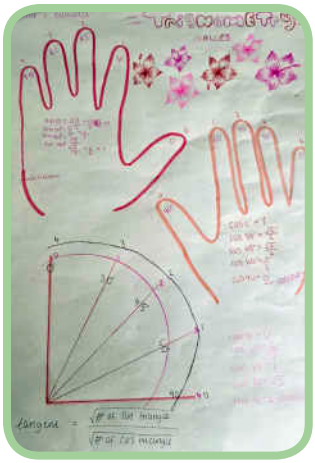


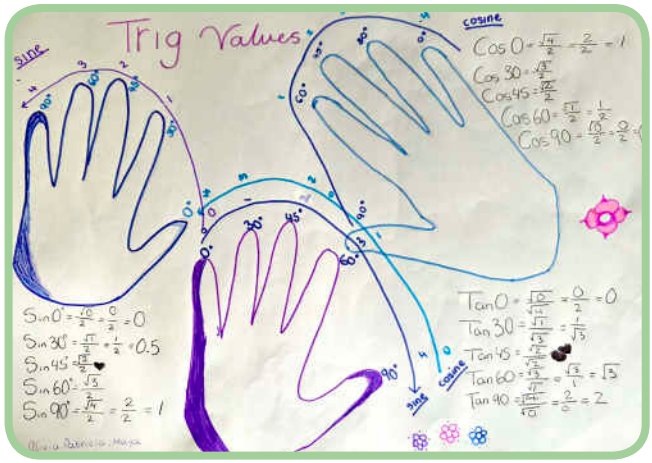
By the end of the activity, students demonstrated a better understanding of expanding double brackets and showed improved confidence in understanding the overall concept.

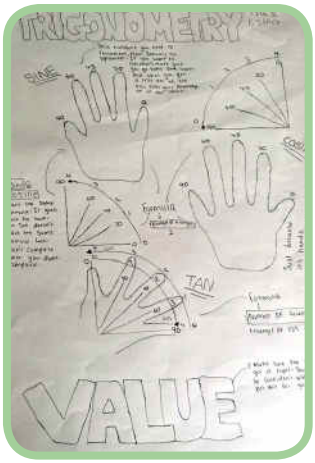
TRIGONOMETRY VALUES
A CREATIVE EXPLORATION



Students from class 9x2 were assigned the task of creating a creative piece based on trigonometric values. The activity encouraged students to explore and present their understanding of trigonometry in an imaginative and engaging way, while applying mathematical concepts through creativity and problem-solving skills.

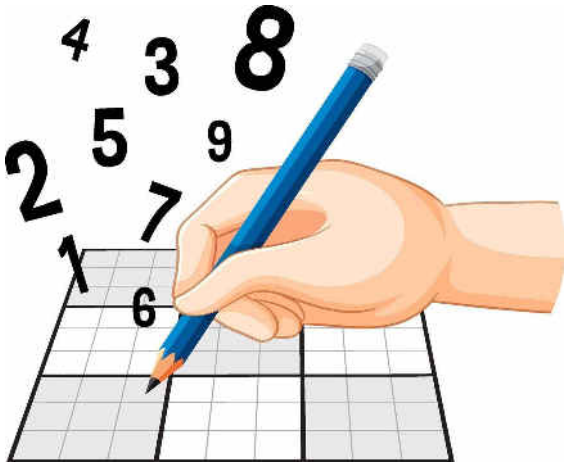






MYSTERIES

SUDOKU PUZZLES • MEDIUM



Sudoku was first created in 1979 by Howard Garns in the USA, where it was originally called "Number Place". It became highly popular in Japan during the 1980s and later gained popularity in the UK around 2004. The word Sudoku comes from a Japanese phrase meaning "*the numbers must appear only once*".

The goal of Sudoku is to complete the grid so that every row, column and smaller box contains all the numbers only once. Most Sudoku puzzles use a **9 × 9 grid** with the **numbers 1 to 9**, while easier versions often use smaller grids such as **4 × 4** or **6 × 6**.

Sudoku may look simple, but it can sometimes be very challenging. The fun comes from using logic and problem-solving skills to work out where each number belongs.

There are different levels of difficulty in Sudoku puzzles:

1. **Easy** — Smaller grids, such as 4 × 4, designed for beginners before moving on to larger puzzles like 6 × 6.

2. **Medium** — Standard 9 × 9 grids with several numbers already filled in and some useful clues to help you get started.

3. **Hard** — Fewer numbers are provided, meaning more advanced thinking and strategies are needed.

4. **Fiendish or Extreme** — Very difficult puzzles intended for experienced players who enjoy a serious challenge.

MATHSPHERE
Sudoku

MEDIUM LEVEL PUZZLE

Fill in the puzzle so that every row across, every column down and every 3 by 3 box contains the numbers 1 to 9.

6	5	9		1		2	8	
1				5			3	
2			8				1	
			1	3	5		7	
8			9					2
		3		7	8	6	4	
3		2			9			4
					1	8		
		8	7	6				

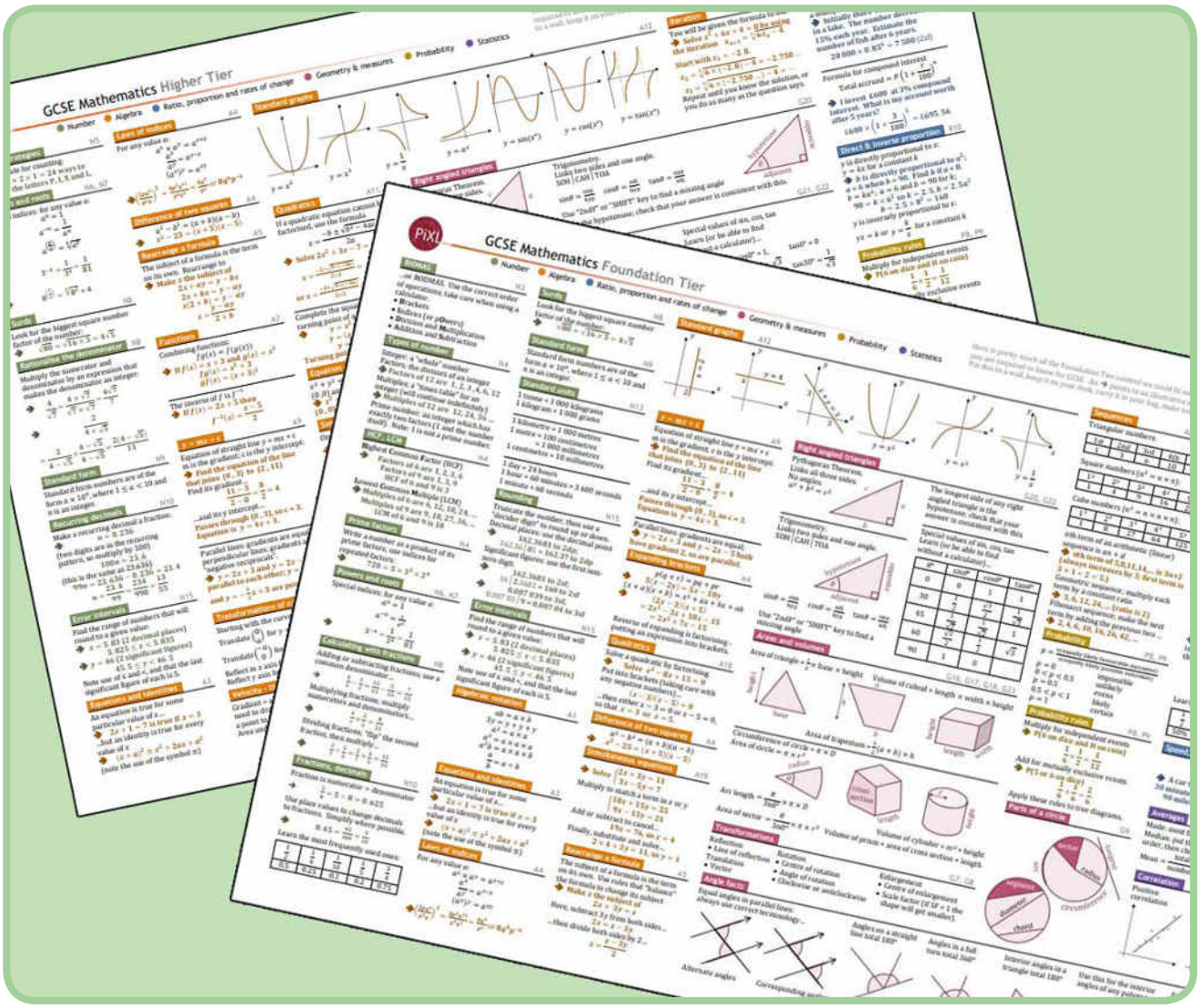
Clues:

1. Seek a 2 in the centre block of squares
2. Finish the centre block of squares
3. Search for 2s everywhere

The solution to this puzzle can be found on the back page - no cheating! 😉

GCSE MATHS EXAM PREPARATION
MATERIALS & RESOURCES DISTRIBUTED

As part of the preparations for this year's GCSE Mathematics examinations, our Subject Lead, Mrs. Harpreet, ensured that all revision materials and resources were shared effectively with every member of staff. One of the key tasks involved printing formula sheets on A3 paper to distribute to students, allowing them to view and revise important formulas via a handy, all-in-one document that presents the information in a clear and effective way.



The students were excited and grateful for the additional support and resources provided. Positive feedback was also received from Miss Calder, who commented on how thankful and appreciative the students were for the materials and preparation support given to them.

MATHS AWARD
RECOGNISING MATHS ACHIEVEMENT

During the summer term, Miss Simpson has introduced an exciting new initiative that is aimed at recognising and rewarding students' achievements in Mathematics.

She came up with the idea to award mathematics achievement certificates to the top three students with the highest marks gained in each end-of-unit test. This approach was designed to motivate students, foster a culture of continuous improvement and celebrate academic success within the subject.

In addition to planning this initiative, Miss Simpson also personally designed and created the certificates that are now being awarded to the students. These certificates serve as a formal recognition of achievement and help to boost confidence and enthusiasm towards mathematics across classes and year groups.

MATHSPHERE
Sudoku Puzzle

SOLUTION

TO MEDIUM LEVEL PUZZLE ON PAGE 13

6	5	9	3	1	4	2	8	7
1	8	7	6	5	2	4	3	9
2	3	4	8	9	7	5	1	6
4	2	6	1	3	5	9	7	8
8	7	1	9	4	6	3	5	2
5	9	3	2	7	8	6	4	1
3	1	2	5	8	9	7	6	4
7	6	5	4	2	1	8	9	3
9	4	8	7	6	3	1	2	5

ST. ANNE'S
CATHOLIC
HIGH SCHOOL

www.st-annes.enfield.sch.uk
x.com/StAnnes_N13
Tel: 020 8886 2165