ROOKS HEATH SCHOOL

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Maths Newsletter

Dear Parents, Carers and Students,



Welcome to our Autumn Term Maths Newsletter!

We are excited to share our students' learning, achievements and mathematical experiences so far this term, along with the exciting opportunities ahead.

Enjoy reading!

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The Maths Team

Mrs S. Subra (Deputy Headteacher)	Mr. Al-Husayni (Head of Maths)	Mrs. Sritharan (KS4 Coordinator)	Mrs H. Grewal (KS3 Coordinator)
Mrs A. Syed	Ms H. Capper	Mrs R. Bandar	Ms. Ikonomi
Mr. Surchi	Mr. Henderson	Mr. Morgan	Ms. Liu

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Homework Expectations

Sparx Maths Homework Expectations

All students are expected to complete their weekly maths homework using **Sparx Maths**. Homework is set every Thursday at **8:00 am** and must be completed by the following Thursday at **5:00 pm**.

Students are encouraged to complete their homework on time each week to reinforce their learning, consolidate their understanding, and build confidence in mathematics.

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Maths Homework Club

Maths Homework Club takes place **every Thursday after school** and is open to all students in Years 7–11.

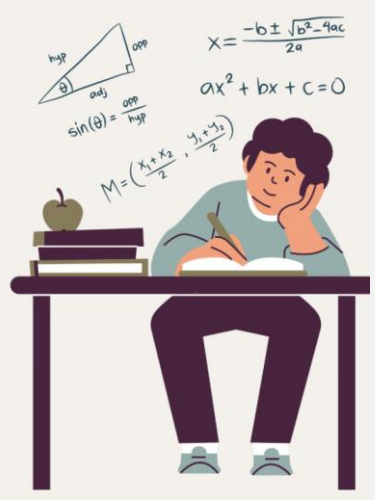
Students should come straight to the **Maths Department after collecting their phones**. Maths teachers will be available to provide support with homework, answer questions and help students build confidence in mathematics.

Come along, get support and make progress!

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Maths Exams & Assessments

Year 11 Mathematics Mock Examinations



Year 11 students will sit three Mathematics mock examination papers:

- **Paper 1: Non-Calculator – 18 November**
- **Paper 2: Calculator – 23 November**
- **Paper 3: Calculator – 25 November**

Students are encouraged to prepare thoroughly by revising key topics, reviewing classwork and practising exam-style questions. Regular revision and consistent practice will help build confidence and prepare students to achieve their best possible results.

Students complete an End-of-Chapter test after each chapter, and parents are encouraged to review the results with their child to celebrate progress and identify areas for improvement.

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Year 11 GCSE Mathematics Masterclass

The Year 11 Mathematics Masterclass is held **every Thursday after school** for both Foundation and Higher students.

Students should come straight to the Maths Department after collecting their phones.

This is an excellent opportunity to develop GCSE exam techniques, revisit key topics, ask questions and take part in focused mathematical discussions.

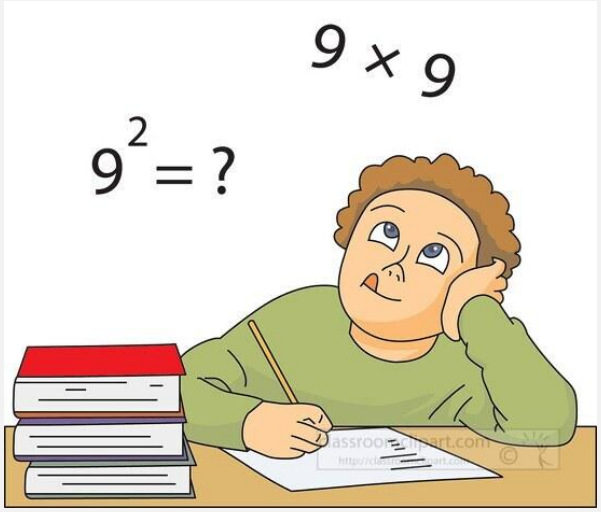
Make the most of this opportunity and don't miss out!

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Autumn Term Overview – Year 7

This term, Year 7 students will be focusing on three key areas:

1. **Number Sense and Calculations**
- Number Sense
- Adding and Subtracting
- Multiplying and Dividing
- Calculating with Negative Numbers
- Order of Operations



2. **Expressions and Equations**
- Expressions
- Substitutions
- Solving equations

3. **Measures**
- Time
- Measures

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Autumn Term Overview – Year 8

This term, Year 8 students will focus on percentages, money calculations, index laws, s olving equations, and position-to-term rules for sequences.



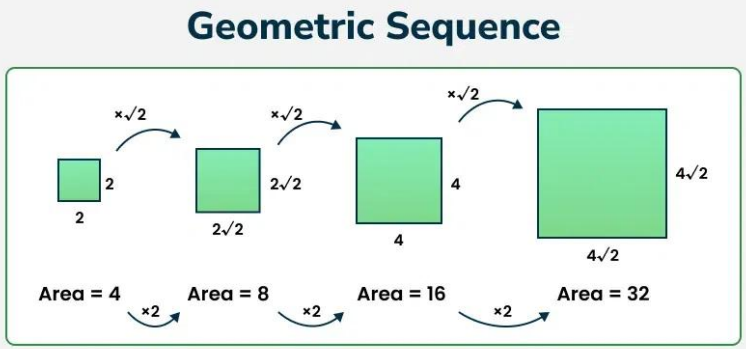
1. **Percentages:**
- Percentage of an amount
- Percentage change

2. **Money:**
- Calculating with money.

3. **Indices:**
- Index laws

4. **Equations:**
- Solving equations.

5. **Sequences:**
- Position – to - term rules.



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Autumn Term Overview – Year 9

This term, Year 9 students will deepen their understanding of the following:



1. **Fractions and Percentages:**
   - Fractions, percentages and decimals review.
   - Percentage change

2. **Probability**: Theoretical and experimental probability.

3. **Standard Forms**: Calculation with standard forms.

4. **Inequalities**: Linear inequalities.

5. **Quadratic equations**: Factorising and solving quadratic equations.

6. **Formulae**: Rearranging formulae

7. **Constructions**: Constricting bisectors and perpendicular lines.

8. **Circles and Cylinders**

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Autumn Term Overview – Year 10

This term, Year 10 students will focus on the following:

1. **Measures and Accuracy**
- Estimation and approximation
- Calculator Methods
- Introduction of Error interval or bounds
- Problem solving with an error interval (H)

2. **Factor, Powers and Roots**
- Factors and multiples
- Prime factor decomposition
- Powers and roots
- Introduction of Surds (H)
- Rationalising surds (H)

- **3. Calculations 2**
- Calculations with roots and indices
- Exact calculations involving fractions, Surds and π
- Standard form

4. **Formulae and functions:**
- Rearrange the subject
- Equivalences in algebra
- Expanding and factorising 2
- Algebraic Fractions (H)
- Composite functions (H)
- Inverse of a function (H)
- Proofs (H)

Underlined topics are for Higher Tier students.

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Autumn Term Overview – Year 11

This term, Year 11 students will focus on the following:

1. **Handling Data:**
- Average and spread
- Box Plot (H)
- Bar Chart and Histograms (H)
- Cumulative Frequency graphs (H)
- Scatter graphs and correlation
- Time serios (H)

2. **Working in 2D:**
- Measuring lengths and angles
- Area of 2D shapes
- Problem solving , Area of Compound shape
- Translation and Reflection
- Rotation and understanding of invariant points
- Enlargement 1 with positive scale factor
- Enlargement 2 with fractional scale factor (H)
- Enlargement 3 with negative scale factor (H)

4. **Sequences:**
- Liner sequences
- Quadratic Sequences (H)
- Expanding and factorising 2
- Special sequences, Geometric and Fibonacci.

Underlined topics are for Higher Tier students.

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UKMT Intermediate Mathematical Challenge (IMC) 2027

The UKMT Intermediate Mathematical Challenge will take place on **Wednesday 27 January 2027**.

Students in **Years 9, 10 and 11** who enjoy mathematics and problem-solving will be considered for entry. Selected students will have the opportunity to take part in this national mathematics competition.

Further information will be shared with participating students in due course.

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Autumn Term Overview – Year 12

Year 12 Mathematics – This Term's Learning

This term, Year 12 students will study three key areas of A-level Mathematics:

- **Pure Mathematics:** Developing algebraic skills, exploring functions and graphs, and learning new mathematical techniques.
- **Statistics:** Analysing data, exploring probability and applying statistical methods to solve problems.
- **Mechanics:** Understanding forces, motion and applying mathematics to real-life physical situations.

Students are encouraged to practise regularly, review their classwork and complete all homework to strengthen their understanding and build confidence.

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Autumn Term Overview – Year 12

This term, Year 12 students are focusing on the following:

1. Algebra and Functions:

- Expanding brackets
- Factorising
- Difference of two squares
- Algebraic fractions
- Laws of indices
- Surds- rationalising the denominator.

2. Quadratics and Cubics:

- Factorising, completing the square, Quadratic Formula
- Quadratics involving functions of x.
- The roots of quadratic function
- Sketching a Quadratic Graph
- Quadratic functions. The discriminant
- Modelling with Quadratics

3. Equations and Inequalities

- Inequalities-linear and quadratic
- Inequalities- graphical inequalities
- Simultaneous equations.

4. Graphs and Transformation:

- Graphs - Cubic
- Graphs - Quartic
- Graphs – reciprocal and negative powers.
- Transformations – transforming graphs – f(x) notation.



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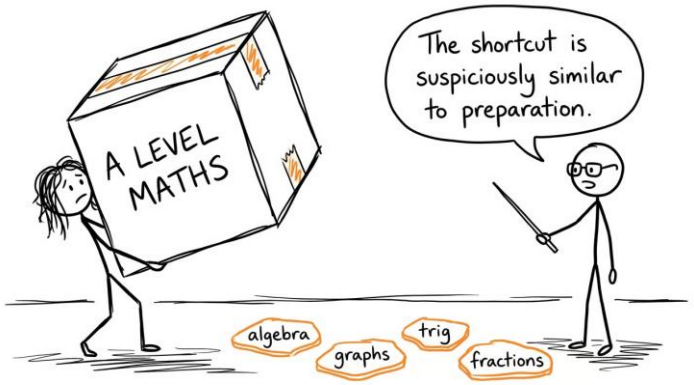
This term, Year 13 students are focusing on the following:

1. Algebra:

- Binomial Expansion
- Algebraic Methods
- Differentiation
- Sequences and Series

2. Geometry

- Trigonometry and Modelling
- Trigonometric Functions
- Radians



3. Applied Mathematics

- Statistics: Regression, Correlation and Hypothesis Testing
- Mechanics: Moments

4. Graphs and Transformations

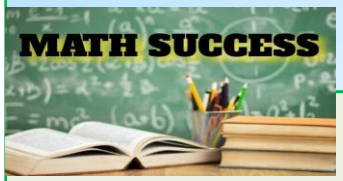
- Functions and Graphs

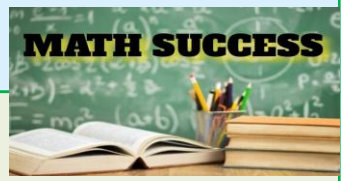
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Mathematics is a journey of discovery, where every challenge is an opportunity to learn and grow.

Keep exploring, keep practising, and believe in your abilities. Every small step forward brings you closer to success.





Thanks for Reading!

Mrs. Bandar and the Maths Team