



Moorside High School

Enriching Lives, Inspiring Ambitions

May 2022

Dear Parents and Carers

At Moorside High school it is our intent:

“To ensure every student leaves us ready for their next successful chapter with students attending university or starting a fulfilling career. We enrich lives and inspire ambitions to ensure students thrive in the world around us”.

Firstly, can I thank you for all the support you have given us throughout the year so far. I have analysed the first Mathematics GCSE Paper and it is clear to see the strong direct link between the advanced information produced by the exam board and the GCSE Paper the students were examined on. We feel that students went into Paper 1 with confidence because of how well we prepared for it, we aim to continue that success for Paper 2 and Paper 3. I am writing to you to highlight some important upcoming intervention sessions which are vital in preparation for the remaining Mathematics Papers, also I want to provide the advance information guidance, so you can support mathematical progress at home. I would like to reiterate the importance of attendance to these extracurricular sessions, as well as attendance to the regular school day.

Paper 2 – Tuesday 7th June

A dedicated session for Paper 2 will take place on Saturday 4th June, 10:00-13:00, the session will be led by the class teacher or subject specialist. Refreshments will be provided.

Paper 3 – Monday 13th June

A dedicated session for Paper 3 will take place Saturday 11th June, 10:00-13:00, the session will be led by the class teacher or a subject specialist. As a reward for attending this session, pizzas will be ordered for students who complete the session.

We will continue to provide all other in-school preparation sessions, after school intervention sessions and pre-exam workshops.

Attached to this letter is the advanced information provided by the exam boards. Students have been provided with these, however we thought it would be beneficial for parents/carers to also see this list to assist in revision. These lists are split into higher and foundation, then by content area.

We hope that you will support and encourage your child to accept the invitation to attend the extra sessions we are providing.

Yours faithfully

Mr J Pinches
Director of Mathematics

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Advanced information provided for Paper 2 Foundation, grouped by content strand. Topics in **bold** are cross over questions, which will be at the end of the Paper and higher difficulty.

Paper 2F - grouped by content area		Paper 2F - grouped by content area	
Number (*see Ratio - some overlap of topic areas)		Ratio, proportion and rates of change (*see Number - some overlap of topic areas)	
Arithmetic	Money	Conversions	Mass, time, area
	Negative number		Scale drawing
Fractions	Fraction arithmetic	Percentages	Decimal to percentage
	Order fractions		Percentage profit
Properties	Order integers		Ratio
	Multiples	Write as a ratio	
Approximation and estimation	Rounding	Proportion	Use of ratio
	Error interval		Direct proportion
Other	Mathematical symbols		Currency conversion
Algebra		Geometry and measures	
Manipulation	Simplification	Shape	Polygons
	Expansion of bracket		Circles
	Factorisation		Parallel and perpendicular lines
	Laws of indices		Transformations
Equations and inequalities	Linear simultaneous equations	Angles	Angles in a triangle
Graphs	Coordinates		Vertically opposite angles
	Straight line graph	Length, area and volume	Area of a rectangle
Functions	Number machines	Probability	
		Probability	Tree diagram
			Combined events
		Statistics	
		Diagrams	Interpret graph
			Two-way table
			Frequency table
		Measures	Mode
			Median
			Mean

Advanced information provided for Paper 3 Foundation, grouped by content strand. Topics in **bold** are cross over questions, which will be at the end of the Paper and higher difficulty.

Paper 3F - grouped by content area		Paper 3F - grouped by content area	
Number (*see Ratio - some overlap of topic areas)		Ratio, proportion and rates of change (*see Number - some overlap of topic areas)	
Arithmetic	Four operations	Conversions	Time
	Negative numbers		Compound units
Fractions	Fraction of an amount	Percentages	Scale drawing
	One amount as a fraction of another		Percentage to fraction
	Equivalent fractions		One quantity as a percentage of another
Properties	Factors	Ratio	Percentage decrease
	Lowest Common Multiple		Reverse percentage
Powers and roots	Square root	Ratio	Write as a ratio
Approximation and estimation	Rounding		1 : n form
Other	Calculator use	Proportion	Direct proportion
Algebra		Compound measures	Average speed
Manipulation	Simplification	Geometry and measures	
	Expansion of bracket	Shape	Triangle properties
	Factorisation		Quadrilaterals
	Substitute values	Angles	Triangular prism
	Change subject of a formula		Angle properties of parallel lines
Forming an expression	Angles in a triangle		
Equations and inequalities	Linear equation	Length, area and volume	Vertically opposite angles
	Form an equation		Bearings
Sequences	Linear sequence	Pythagoras's Theorem and Trigonometry	Area of a triangle
Statistics			Area of a trapezium
Diagrams	Frequency polygon	Pythagoras's Theorem and Trigonometry	Pythagoras's Theorem
Measures	Median	Probability	
	Range	Probability	Probability scale
Population	Comparison of distributions		Probability

Advanced information provided for Paper 2 Higher, grouped by content strand. Topics in **bold** are cross over questions, which will be at the start of the Paper.

Paper 2H - grouped by content area		Paper 2H - grouped by content area	
Number (*see Ratio - some overlap of topic areas)		Ratio, proportion and rates of change (*see Number - some overlap of topic areas)	
Approximation and estimation	Error interval	Conversions	Area
Other	Use of a calculator	Percentages	Depreciation
Algebra		Ratio	Use of ratio
Manipulation	Simplification	Proportion	Direct proportion
	Expansion of bracket		Currency conversion
	Factorisation		Inverse proportion
	Laws of indices	Compound measures	Pressure
Equations and inequalities	Linear equation	Geometry and measures	
	Equations of parallel lines	Shape	Transformations
	Form an equation	Angles	Circle theorems
	Quadratic inequality	Length, area and volume	Area of a rectangle
Graphs	Coordinates		Volume of composite solid
	Transformations of functions	Pythagoras's Theorem and Trigonometry	Sine and Cosine Rules
	Graphs of trigonometric functions	Probability	
Functions	Inverse and composite functions	Probability	Venn diagram
			Probability from a Venn diagram
	Statistics		
	Diagrams	Box plot	
	Measures	Lower and upper quartiles	
	Populations	Compare distributions	
		Capture-recapture method	

Advanced information provided for Paper 3 Higher, grouped by content strand. Topics in **bold** are cross over questions, which will be at the start of the Paper.

Paper 3H - grouped by content area		Paper 3H - grouped by content area	
Number (*see Ratio - some overlap of topic areas)		Ratio, proportion and rates of change (*see Number - some overlap of topic areas)	
Arithmetic	Negative numbers	Conversions	Time
Properties	Laws of indices	Percentages	Percentage decrease
Approximation and estimation	Bounds		Depreciation
Other	Product rule for counting		Reverse percentage
Algebra		Ratio	Write as a ratio
Manipulation	Simplification	Proportion	1 : n form
	Expansion of bracket		Share in a ratio
	Substitute values		Direct proportion
	Difference of two squares	Compound measures	Average speed
	Expansion of brackets	Growth and decay	General iterative processes
	Change subject of a formula	Geometry and measures	
	Forming an expression	Angles	Circle theorems
	Algebraic fractions	Length, area and volume	Area of a trapezium
Equations and inequalities	Set up and solve equation	Pythagoras's Theorem and Trigonometry	Similar triangles
	Simultaneous equations linear/quadratic		Pythagoras's Theorem
Graphs	Gradient of a straight line graph		Trigonometry
		Column vectors	
		Probability	
		Probability	Dependent combined events
		Statistics	
		Diagrams	Frequency polygon
			Histogram