Maths Foundation

KS4
Curriculum Details

Year 10

Modules	Content	Homework	Parent / Carer Support
Autumn Term:	Calculating: Working with Standard index form Rounding numbers and applying limits of accuracy Visualising and constructing: Constructions and applications to loci Plans and elevations Calculating space: Knowing and using circle theorems Arc lengths, area of sectors and segments Pythagoras' theorem Conjecturing: Congruency criteria for triangles Algebraic proficiency: Understand definitions for algebraic expressions, equations, identities and formulae Manipulate expressions through collecting like term, multiplication, expanding and factorising brackets Algebraic proficiency 2: Understand linear graphs (y=mx+c) and how the gradient and y-intercept can be found. Find the equation of a line from 2 points Interpret gradient Recognise, sketch and interpret key graphs	Weekly homework tasks set on Hegarty maths - students should watch the video in full and make notes in their homework book before attempting the quiz	Check that students have watched the video prior to attempting the quiz. If they need further support there are 'Building blocks' on prerequisite skills at the bottom of the page. Students will be assessed each half term on cumulative topics in the style of a GCSE exam. Cheat sheets can be produced and used in these assessments and should be no more than one side of A4. Students can aid their revision by completing weekly Memri or Fix up 5 tasks on Hegarty maths.
Spring Term:	Solving equations and inequalities 1: Understand concepts and vocabulary of inequalities Solve linear inequalities Represent the solution set to an inequality on a number line Use a number line to find a set of values that are true for 2 inequalities Pattern sniffing: Recognise arithmetic, quadratic, geometric and Fibonacci sequences Identify term to term rules and find missing terms in a sequence Establish and use the nth term for linear sequences Proportional reasoning: Direct and inverse proportion Understand and use concepts of congruency and similarity Understand and use compound units		

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Year 10 continued

	Content
	Understanding risk: Probability of independent and dependant events Interpret and use Relative frequency and Theoretical probabilities Solving equations and inequalities 2 : Solve linear simultaneous equations Find solutions using a graph Analysing Statistics: Interpret Scatter graphs, using a line of best fit to make estimations Calculate averages from a frequency table including grouped data
Summer Term:	Angles: Calculate angles in polygons Calculate angles in parallel lines Investigating properties of shapes: Use trigonometric ratios to find missing sides and angles in 2D right-angled triangles Know some exact values for sin, cos and tan ratios for the angles Transformations: Describe and construct reflections, rotations and translations Describe and construct Enlargements including with fractional scale factors Transformations 2: Use and interpret visual representations of vectors Apply addition, subtraction and multiplication by scalar to column vectors. Solving Algebraically 3: Approximate solutions of a quadratic equation using its graph Solve quadratic equations through factorisation where a =1 Calculating space: calculate the surface area and volume of 3D shapes including spheres, cones and pyramids Exploring fractions, decimals and percentages: Calculated repeated percentage change Recognise when simple interest and compound interest calculations are needed Set up, solve and interpret growth and decay problems

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Year 11

Foundation

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Content

Over the course of year 11 each group will follow a bespoke scheme of work which is planned through analysis of the class mock examinations, this will involve revision or extension as appropriate and key skills to access exam level questions. Students will be assessed each half term on non calculator skills. At December and Easter they will sit full sets of exam papers as mock exams. Cheat sheets will not be allowed to be used in any year 11 assessments.

Homework

All students will be set a weekly examination style booklet.
Class teachers will also set Hegarty tasks on specific topics.

Extra parental support: Spelling tests of key words Test times tables and mental arithmetic.
Ask students to explain HOW they have worked something out.
Make posters of important formulae and facts and test recall of these.
All students should have the latest Casio calculator (available in most supermarkets and stationers) and will ideally have a maths equipment set including a protractor and a pair of compasses.

Parent / Carer Support

Check students are organised on what day to bring their exam paper homeworks.
Are they using revision guides to help if they do not know a topic?
Students can aid their revision through completing regular Memri or Fix up 5 tasks on Hegarty.

Study Guides Available:

ww.hegartytmaths.com

Additional website for revision: www.onmaths.com

OCR CGP revision guide - £5.50

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