Curriculum Map – Maths – Year 11

Text in red applies to higher only

Key focusGradients and Lines Non-Linear GraphsExpanding and factorising Changing the subject FunctionsMultiplicative reasoning Algebraic reasoning Algebraic reasoning Algebraic reasoning Show thatTransforming and constructing Lising and describing Show thatRevisionKey knowledge and skillsEquations of vertical and horizontal lines, Plotting and interpreting graphsExpand bracketsUse scale factorsPerform transformationsFinding the equation of a line pointsFactorise quadratics solve equations and inequaltiesUse scale factorsPerform transformationsSolve invitaneous equations graphicallyChange the subject of a from a read niterpret graphsFunction machinesDirect and inverse proportionPerform standard constructionsPlot and read and recognise quadratic, cubic and reciprocal graphsFunction machinesLinear simultaneous equationsNumber AlgebraReflect shapes given lines graphsFunction machinesLinear simultaneous equationsNumber AlgebraReflect shapes given lines graphsConstruct direct and inverse proportion graphsSolve by quadratic functionsLinear simultaneous equationsNumber AlgebraReflect shapes given lines graphsComplete the square solve by quadratic expressionsCircle Theorems solve by quadratic functionsSolve simultaneous equationsNumber AlgebraReflect shapes given lines graphsComplete the square solve by quadratic formal and perpendicular lines exponential and perpendicular tines solve by quadratic formal <br< th=""><th></th><th>Half term 1</th><th>Half term 2</th><th>Half term 3</th><th>Half term 4</th><th>Half term 5</th></br<>		Half term 1	Half term 2	Half term 3	Half term 4	Half term 5
Key howledge and skillsEquations of vertical and horizontal lines, Pictoring graphsExpand bracketsUse scale factorsPerform transformationshorizontal lines, Pictoring graphsFinding the equation of a line from a graph, from two pointsFactorise quadratics Solve quadratics Solve equations and inequalitiesDirect and inverse proportionIdentify transformationsSolve simultaneous equations graphicallySolve equations and inequalitiesDirect and inverse proportionIdentify transformationsPlot and read and recognise quadratic, cubic and interporter cots and intercepts of quadratic graphsForm and Solve equations in the context of shapeNumberIdentify and interport graphsForm and Solve equations in the context of shapeLines interior anglesNumberReflect shapes given lines graphsFunction machines function or graphsLinear simultaneous equationsNumberRecognise parallel and perpendicular lines in an opeComplete the square solve yquadratic functionsComplete the square solve yquadratic functionsConsplete the square solve yquadratic functionsNumberRecognise parallel and perpendicular linesComplete the square solve by quadratic formulaSolve by quadratic formula solve yquadratic formulaSolve by quadratic formula solve by quadratic functionsSolve by quadratic formulaRecognise parallel and perpendicular linesComplete the square solve by quadratic formulaSolve by quadratic formula solve by quadratic formulaSolve by quadratic formula solve by quadratic formul	Key focus	Gradients and Lines Non-Linear Graphs Using Graphs	Expanding and factorising Changing the subject Functions	Multiplicative reasoning Geometric reasoning Algebraic reasoning	Transforming and constructing Listing and describing Show that	Revision
curve	Key knowledge and skills	Equations of vertical and horizontal lines, Plotting and interpreting graphs Finding the equation of a line from a graph, from two points Solve simultaneous equations graphically Plot and read and recognise quadratic, cubic and reciprocal graphs Identify and interpret roots and intercepts of quadratic Reflect shapes given lines Construct and interpret graphs Recognise and interpret proportion graphs Recognise parallel and perpendicular lines Find the equation of parallel and perpendicular lines Exponential and circle graphs Equation of a tangent to a curve	Expand brackets Factorise quadratics Solve quadratics by factorisation Solve equations and inequalities Change the subject of a formula Form and Solve equations in the context of shape Function machines Function notation Graphs of quadratic functions Factorise complex quadratic expressions Complete the square Solve by quadratic formula Change the subject where the subject appears more than once Solve by iteration Composite functions	Use scale factors Direct and inverse proportion Basic angle rules Parallel and Perpendicular Lines, interior and exterior angles Vectors nth term Linear simultaneous equations Use rules for sequences Construct direct and inverse proportion equaltions Ratio problems Circle Theorems Solve simultaneous equations with one quadratic Formal proof Two variable inequalities	Perform transformationsIdentify transformationsIdentify transformationsPerform standard constructionsLists, sample spaces, venn diagramsPlans and elevationsCompare data, compare scatter diagramsNumberAlgebraShape and anglesNegative enlargementsInvariant pointsTranslations and reflections of graphs including trigonometric graphsProduct rule for countingVectorsCongruent triangles	

"Perseverance produces character, and character, hope" (Romans 5:4)



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Half term 6
Revision

Curriculum Map – Maths – Year 11

		Quadratic inequalities			
Key words/ vocabulary	Gradient Linear Horizontal Vertical General equation Non-linear Y-intercept X-intercept Graphing lines Applications of gradients and lines	Brackets Common factors Highest common factor (HCF) Factors Quadratic expressions Difference of 2 squares Sum Product Inverse Rearrange Function Input Output	Ratio Proportion Share Parts Direct proportion Inverse proportion Parallel Perpendicular Co-interior Alternate Corresponding Vector Direction Magnitude Scalar Column vector Equation Inequality Bound Radius Diameter Chord Bisect Centre Circumference	Transformation Translation Reflection Invariant Vertical Horizontal Reflection y-axis x-axis Enlargement Bisect Construct Plan Side elevation Data Spread Sample Average Proof Combination	
Assessment method	Topic Assessments (Formative)	Topic Assessments (Formative) Summative assessment GCSE	Topic Assessments (Formative)	Topic Assessments (Formative) Summative assessment GCSE	
Wider links	Distance time Speed time (Science)	Functions (Computer science)	Forces (Science) Programming (Computer Science) Measuring ingredients (Tech)	Comparing data (Science) Forces (Science)	
Enrichment opportunities	Further maths GCSE Tabletop games club <u>www.nrich.maths.org</u> problems Suggested further activities: STEM outreach team at the University of Leeds, Bletchley Park, Bank of England Museum, The Royal Observat				
Careers links	Analyst (data, investment,), engineer, architect, actuary, accountant, software engineer, maths teacher				



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