Madani Girls Schools – Mathematics (2024-2025) – Higher Schedule

2024/ 2025	AUTUMN		SPRING		SUMMER	
	HT1	HT2	HT3	HT4	HT5	HT6
Y 7	**Area of study** ➤ Number **Key concepts** Place Value / Order of Operations Whole Numbers (+/-/x/÷) / Worded Prob Decimal Calculations (+/-/x/÷) Types of Numbers / Negative Numbers Primes / Multiples / Factors Prime Factor Trees / LCM / HCF **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Algebra / Graphs **Key concepts** Substitution / Simplifying Expand (single) / Factorise (linear) Making Formulas from Words / Using Form Solving Equations (one-step / two-step) Sequences - Calculating the nth term (linea Coordinates (x, y) - four quadrants **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Fractions / Percentages / Ratio **Key concepts** Fraction Basics (equivalent, simplify, convert) Fraction Calculations (+/-/x/÷) Fractions of Amounts (calc/no-calc) Percentages of Amounts (calc/no-calc) Ratio Calculations (simplify, share, recipes) **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Shape **Key concepts** Properties of 2D / 3D Shapes Perimeter & Area (square, rectangle, tria Compound Shapes / Plans & Elevations Surface Area & Volume (cube, cuboid) Measuring & Drawing Angles **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Shape / Angles / Probability **Key concepts** Angle Basics (line, point, triangle) Triangle Constructions Introduction to Transformations Probability Basics / Experimental / Listing Outcomes **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Data **Key concepts** Types of Data (discrete / continuous) Mean, Mode, Median, Range Pictograms / Bar Charts Frequency Tables (calculate averages) **Assessment method** ➤ End of Topic Test
Y 8	**Area of study** ➤ Number **Key concepts** Revision of Four Operations (whole / dec Rounding (decimals places / significant fig Accuracy & Estimating Basic Power Rules / Square Root / Cube R Revision of Prime Factor Trees / LCM / H Introduction to Standard Form **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Algebra / Graphs **Key concepts** Revision of Algebraic Notation (simplify / e Expand (double) / Factorise (quadratic) Rearranging Formulae (simple) Solving Equations (brackets / unknown bot Introduction to Inequalities Conversion Graphs / Real Life Graphs **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Fractions / Percentages / Ratio **Key concepts** F/D/P Conversions / Worded Problems Revision of F/P (amounts / inc / dec / multi Percentages (original value / percentage ch Best Buy / Recipes / Reading Timetables Unit Conversions / Maps / Scale Drawings **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Shape **Key concepts** Perimeter & Area (trapezium, parallelogr Revision of Perimeter & Area / Compoun Introduction to Circles Surface Area & Volume (triangular prism, Parallel Lines **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Angles / Transformations / Probability **Key concepts** Angles in Polygons Translation / Rotation / Reflection Enlargement of Shapes Frequency Trees / Introduction to Venn Dia **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Data **Key concepts** Two-Way Tables / Line Graphs Time Series / Pie Charts Scatter Graphs (correlation) Grouped Frequency Tables (calculate **Assessment method** ➤ End of Topic Test
Y 9	**Area of study** ➤ Number **Key concepts** Worded Problems (whole numbers / dec Types of Numbers / BODMAS / Negative Simple / Compound Interest Revision of F/D/P (mixed / worded) Powers & Roots (negative, fractional) Manipulating Surds (simplify, rationalise) **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Algebra **Key concepts** Simplifying / Expanding / Substitution Factorising (linear / quadratic / D.O.T.S.) Solve by using Quadratic Formula Completing the Square / Turning Points Solving Equations (mixed / worded) Rearranging Formulae (harder) Algebraic Fractions (+/-/x/÷) Functions (composite, inverse, algebraic) **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Constructions / Shape **Key concepts** Constructions Loci (rules) Bearings / Scale Drawings Pythagoras' Theorem (2D) - ext 3D Trigonometry (2D) - ext 3D **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Data **Key concepts** Box Plots / Cumulative Frequency Histograms (frequency density) Time Series / Scatter Graphs Interpreting Data / Comparing Data Probability Basics / Experimental / Product Rule **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Probability **Key concepts** Listing Outcomes / Frequency Trees The AND / OR Rules (dependent / independ Tree Diagrams / Conditional Probability Sets & Venn Diagrams **Assessment method** ➤ End of Topic Test	**Area of study** ➤ Angles / Circles **Key concepts** Revision of Graphs & Charts Revision of Angle Rules (mixed / word Circle Theorems - Rules Circle Theorems - Proof **Assessment method** ➤ End of Topic Test

Y 10	**Area of study** ➢ Number **Key concepts** Revision of Prime Factor Trees / LCM / H[C...] Revision of Powers & Roots / Manipulati[...] Fractions & Recurring Decimals Rounding / Estimation / Iteration Upper & Lower Bounds Standard Form Calculations **Assessment method** ➢ End of Topic Test	**Area of study** ➢ Algebra / Shape **Key concepts** Sequences (linear / quadratic) Inequalities (linear / quadratic) Graphical Inequalities / Proof Simultaneous Equations (linear / quadratic) 2D Shapes / Perimeter & Area Circles - Sectors / Segments **Assessment method** ➢ End of Topic Test	**Area of study** ➢ Graphs **Key concepts** Coordinates / Midpoints Straight Line Graphs (gradient / intercept) Parallel Lines / Perpendicular Lines Plotting Graphs (linear / quadratic) Harder Graphs / Circle Graphs **Assessment method** ➢ End of Topic Test	**Area of study** ➢ Graphs / Percentages **Key concepts** Graph Transformations Distance Time Graphs Velocity Time Graphs Real Life Graphs / Gradients of Real Life [...] Revision of Percentages (mixed / worded[...] **Assessment method** ➢ End of Topic Test	**Area of study** ➢ Ratio / Proportion **Key concepts** Revision for Mock Exams Ratio Calculations (mixed / worded) Direct / Inverse Proportion Unit Conversions / Speed, Density, Pressur[...] Revision for Mock Exams **Assessment method** ➢ End of Topic Test	**Area of study** ➢ Transformations **Key concepts** Translation / Rotation / Reflection Enlargement of Shapes (negative, fra[...] Work Experience **Assessment method** ➢ End of Topic Test
Y 11	**Area of study** ➢ Shape **Key concepts** Congruent / Similar Shapes Pythagoras' Theorem / Trigonometry (2D[...] Pythagoras' Theorem / Trigonometry (3D[...] Sine Rule / Cosine Rule Mixed Worded Problems (Pyth/Trig/Sin/[...] Vectors **Assessment method** ➢ End of Topic Test	**Area of study** ➢ Revision 1 **Key concepts** Topic Revison: Number Topic Revison: Number & Assessment Topic Revision: Algebra Topic Revision: Algebra & Assessment Topic Revision: Graphs / Ratio Topic Revision: Graphs / Ratio & Assessment Mock Past Paper Practice: Set 1 Mock Past Paper Practice: Set 2 **Assessment method** ➢ Past Papers	**Area of study** ➢ Revision 2 **Key concepts** Topic Revison: Data / Probability Topic Revison: Data / Probability & Assessment Topic Revision: Geometry Topic Revision: Geometry & Assessment Mock Past Paper Practice: Set 3 Mock Past Paper Practice: Set 4 **Assessment method** ➢ Past Papers	**Area of study** ➢ Past Papers 1 **Key concepts** Past paper practice 2016 Past paper practice 2017 Mock Past Paper Practice: Specimen **Assessment method** ➢ Past Papers	**Area of study** ➢ Past Papers 2 **Key concepts** Past paper practice 2018 Past paper practice 2019 Mock Assessment Exams **Assessment method** ➢ Past Papers	**Area of study** ➢ Examinations **Key concepts** Exam Revision **Assessment method** ➢ Past Papers

	AREAS OF STUDY	KEY CONCEPTS	ASSESSMENT METHOD
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