Unit Code J560/06
Qual Name GCSE Mathematics - Paper 6 (Higher tier)
Qual Title Paper 6 (Higher tier)

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Additional Notes/Comments
1	1	3	3	3.02 Standard form (4.01)	Standard form calculation, Interpretation of a result	Common question
1	2	4	1	11.01 Basic probability and experiments	Probability in context	Common question
1	3	2	2	8.02 Ruler and compass constructions	Perpendicular from a point to a line	Common question
1	4	4	2	6.04 Algebraic inequalities	Solve an inequality and interpret an inequality on a number line	
1	5	6	3	5.03 Discrete growth and decay	Repeated percentage change	
1	6	6	3	11.02 Combined events and probability diagrams	Sample space, Probability calculation	
1	7	4	2	6.01 Algebraic expressions	Algebraic proof	
1	8	3	2	7.01 Graphs of equations and functions	Trig graph	
1	9	8	3	10.01 Units and measurement (10.05)	Time, distance, speed, Cosine rule in context	
1	10	4	3	10.04 Volume and surface area calculations	Find the radius of a cone given the ratio of its height to its radius	
1	11	6	1	7.01 Graphs of equations and functions (7.02)	Equation of a circle, Gradient of a tangent to a circle	
2	1	4	1	3.02 Standard form	Order values, some in standard form and some in different units	Common question
2	2	2	2	11.01 Basic probability and experiments (12.03)	Basic probability of a single outcome on a diagram, Misleading diagram	Common question
2	3	3	1	10.05 Triangle mensuration	Right-angled trig.	
2	4	4	1	5.01 Calculations with ratio	Ratio and probability in a counters context	Common question
2	5	4	2	7.02 Straight line graphs	Equations of parallel lines	Common question

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2	6	8	3	1.02 Whole number theory (3.01)	LCM of two numbers given in index form, Use prime factors and laws of indices	
2	7	5	3	10.05 Triangle mensuration	3D Pythagoras and surface area	
2	8	3	1	6.03 Algebraic equations	Solve an $ax^2 + bx + c = 0$ quadratic by factorisation	
2	9	7	2, 3	6.03 Algebraic equations	Show that the solution to an equation lies in a given interval, Use iteration to find an approximate solution to an equation	
2	10	4	1	9.04 Similarity	Length, area and volume scale factors	
2	11	6	2, 3	5.03 Discrete growth and decay	Interpret part of an exponential growth formula, Show a given result using an exponential growth formula	
3	1	4	1	6.04 Algebraic inequalities	Solve a linear inequality and display the solution on a number line	Common question
3	2	6	3	5.03 Discrete growth and decay	Set up and solve an equation involving compound interest and simple interest	
3	3	4	1	11.02 Combined events and probability diagrams	List combinations to find a percentage	
3	4	4	3	10.04 Volume and surface area calculations	Volume of a pyramid	
3	5	6	2, 3	9.03 Plane vector geometry	Vector arithmetic leading to an equation, Complete a vector diagram to show the sum of two vectors	
3	6	8	2	6.06 Sequences	Use a position-to-term rule presented in subscript notation, Make a deduction about a sequence	Common question
3	7	3	1	3.01 Powers and roots	Understand notation for powers and roots; apply laws of indices	
3	8	7	2	12.02 Interpreting and representing data	Use a histogram	
3	9	8	2, 3	8.05 Circles	Use circle theorems to calculate a missing angle and justify a given angle	
4	1	5	3	2.03 Percentages	Find an original amount within problem solving	
4	2	3	1	11.02 Combined events and probability diagrams	Combined probability calculation	
4	3	5	3	6.03 Algebraic equations	Set up and solve an equation int the context of area	Common question
4	4	10	2	7.01 Graphs of equations and functions (6.02, 6.03)	Graph of quadratic and straightline, including the intersection	Common question

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4	5	6	1	6.01 Algebraic expressions (1.01)	A "show" calculation to aid understanding of the context, Algebraic proof involving collecting terms	
4	6	10	1	4.01 Approximation and estimation (10.01)	Time, distance, speed, Use upper and lower bounds as appropriate in a calculation	
4	7	5	3	11.02 Combined events and probability diagrams	Dependent events calculation with no tree diagram provided	
4	8	6	2	9.04 Similarity	Find the centre of enlargement, negative enlargement	
5	1	6	2, 3	12.03 Analysing data	Plot points on a scatter diagram, line of best fit, outlier	Common question
5	2	6	2	7.04 Graphs of real-world contexts	Use a conversion graph, Interpret gradient in context	
5	3	7	1	4.01 Approximation and estimation (2.03)	Estimate the answer to a calculation , Find one quantity as a percentage of another	
5	4	3	1	8.03 Angles	Work out the exterior and interior angle of a polygon	
5	5	8	2, 3	6.05 Language of functions (6.01)	Set up and solve an equation using the outputs of two functions, Recognise the difference between an equation and an identity	
5	6	5	3	10.04 Volume and surface area calculations	Volume of a cone and a cylinder	
5	7	5	2	8.05 Circles (10.05)	State the circle theorem used to justify a given angle, Right-angled trig. after applying a circle theorem	
5	8	4	3	9.03 Plane vector geometry	Find parallel vectors in an algebraic context	
5	9	6	1	6.01 Algebraic expressions	Simplify algebraic fractions	
6	1	4	1	6.04 Algebraic inequalities	Solve a linear inequality and display the solution on a number line	Common question
6	2	6	3	10.01 Units and measurement	Problem solving involving volume, density and unit conversions	Common question
6	3	4	2	9.03 Plane vector geometry	Represent a 2-dimensional vector as a column vector	Common question
6	4	4	3	11.02 Combined events and probability diagrams	Problem solving in a probability context	
6	5	4	2	5.02 Direct and inverse proportion	Find a formula linking three variables	
6	6	3	3	2.03 Percentages	Repeated percentage change and finding the original amount	

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6	7	3	1	11.02 Combined events and probability diagrams	List combinations to find a probability	
6	8	4	3	9.04 Similarity	Length, area and volume scale factors	
6	9	4	1	11.02 Combined events and probability diagrams	Dependent events calculation with no tree diagram provided	
6	10	4	1	6.06 Sequences	Find the next term and nth term where the sequence involves surds	
6	11	3	1	2.02 Decimal fractions	Change a recurring decimal into a fraction	
6	12	7	2	6.03 Algebraic equations	Use a given curve to solve a quadratic equation, using line and quadratic to solve an equation	