

Assessment resource number	Assessment resource title	Assessment resource question number	Total number of marks	Content coverage (high level)	Content coverage (breakdown)	AO coverage	Component	Tier
19	Non-calculator paper Assessment resource J	1	2	Statistics	Criticise diagram and interpret data	2	5300/03	Higher
		2	5	Ratio, proportion, rates of change	Fraction and percentage problem	1 3	C300UA0	
		3	2	Geometry	Vector arithmetic	1 7		
		4	3	Ratio, proportion, rates of change	Percentages: original value problem	1		
		5	7	Probability	Probability tree diagram	1 2		
		6	5	Number and ratio, proportion, rates of change	Standard form: calculation and problem	1 3		
		7	6	Statistics	Box plots	2		
		8	3	Statistics and ratio, proportion, rates of change	Histogram	1 2		
		9	3	Geometry	Circle theorems: alternate segment, opposite angles in a cyclic quadrilateral	1 3		
		10	5	Geometry	Vector proof	2		
			Total = 41					
20	Non-calculator paper Assessment resource K	1	8	Algebra	Linear equations and inequality	1 2	5300/03	Higher
		2	7	Algebra	Quadratic function: graph and properties	1 2	C300UA0	
		3	3	Algebra	Change the subject of a formula (new subject in 2 terms)	1		
		4	9	Number and algebra	Indices	1		
		5	7	Algebra	Functions: composite and inverse	All		
		6	7	Algebra	Equation of a circle and a tangent	All		
			Total = 41					
21	Non-calculator paper Assessment resource L	1	6	Number	Product of prime factors; HCF problem	1 3	5300/03	Higher
		2	5	Number and ratio, proportion, rates of change	Limit of accuracy and direct proportion	3	C300UA0	
		3	8	Geometry and ratio, proportion, rates of change	Ratios to compare lengths and volumes; compound units and percentage increase problem	All		
		4	8	Number and geometry	Surds and area of a trapezium	All		
		5	5	Number and probability	Product rule for counting and probability	3		
		6	6	Number and ratio, proportion, rates of change	Bounds problem	1 2		
			Total = 38					
22	Non-calculator paper Assessment resource M	1	3	Geometry	Draw plan and elevation	2	5300/03	Higher
		2	3	Geometry	Pythagoras and an isosceles triangle problem	1 3	C300UA0	
		3	6	Geometry and ratio, proportion, rates of change	Mensuration problem includes area, perimeter, 2 part ratio and fraction of a quantity	1 3		
		4	7	Algebra	Equation of a straight line and its perpendicular bisector	1 2		
		5	6	Ratio, proportion, rates of change	Variation: inverse (no context)	1 2		
		6	5	Ratio, proportion, rates of change	Iterative formulae	1 2		
		7	8	Algebra	Functions: inverse and composite	All		
			Total = 38					
23	Non-calculator paper Assessment resource N	1	3	Number	Standard form problem; estimation	1 2	5300/03	Higher
		2	6	Ratio, proportion, rates of change	Simple interest	1 2	C300UA0	
		3	4	Number	Fractions: addition and subtraction problem	1 3		
		4	6	Number and ratio, proportion, rates of change	Number problem and inverse proportion problem	1 3		
		5	5	Number	Indices: negative and fractional	1		
		6	6	Probability	Probability tree diagram	1 2		
		7	4	Number	Product rule for counting	3		
		8	7	Number	Surds	All		
			Total = 41					

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24	Non-calculator paper Assessment resource O	1	4	Statistics	Criticising surveys	2	5300/03	Higher
		2	7	Algebra	Linear equation, simultaneous equations and inequality	1 2	C300UA0	
		3	2	Probability	Probability of independent events	3		
		4	3	Statistics and ratio, proportion, rates of change	Sampling to infer population	2 3		
		5	11	Statistics	Cumulative frequency and box plot	All		
		6	5	Algebra	Interpreting graphs: quadratic and exponential functions	2 3		
		7	4	Algebra	Equation of a circle and a tangent	3		
		8	5	Algebra	Estimate area under a curve	1 2		
			Total = 41					
25	Non-calculator paper Assessment resource P	1	2	Statistics	Criticise graph	2	5300/03	Higher
		2	5	Number	HCF problem	1 3	C300UA0	
		3	10	Number and algebra	Powers and roots: indices, surds, standard form	All		
		4	6	Ratio, proportion, rates of change and probability	Two-way table problem: percentage increase, 2-part ratio, probability	1 3		
		5	2	Number	Write recurring decimal as a fraction	1		
		6	4	Number	Product rule for counting	3		
		7	7	Algebra and number	Functions: inverse function, composite function. Indices	All		
		8	4	Algebra and geometry	Equation of a circle and inscribed hexagon	1 3		
			Total = 40					
26	Non-calculator paper Assessment resource Q	1	3	Ratio, proportion, rates of change	3-part ratio	1 2	5300/03	Higher
		2	5	Ratio, proportion, rates of change	Pressure problem	1 3	C300UA0	
		3	5	Ratio, proportion, rates of change	Ratio problems: interpreting a fraction as a ratio, 3-part ratio problem	3		
		4	6	Ratio, proportion, rates of change and algebra	Inverse proportion and direct proportion	1 2		
		5	6	Algebra	Solve equations: linear (including expanding brackets); quadratic (by factorising)	1		
		6	7	Statistics	Cumulative frequency and box plot	2		
		7	8	Algebra and ratio, proportion, rates of change	Kinematics: use velocity-time graph to estimate acceleration and area under the curve	1 2		
					Total = 40			
27	Non-calculator paper Assessment resource R	1	3	Number	Fraction division (mixed numbers)	1	5300/03	Higher
		2	4	Number and geometry	Calculating with pi	1 3	C300UA0	
		3	1	Algebra	Equation of parallel line	1		
		4	4	Probability	Probability tree diagram	1 2		
		5	6	Algebra and number	Sequences: next term (geometric) and nth term (quadratic); surds	1 2		
		6	5	Geometry	Vectors: diagram; argument	1 2		
		7	3	Geometry	Combined transformations: reflection and translation	3		
		8	4	Geometry	Circle theorems: congruent triangles problem, cyclic quadrilateral	2		
		9	5	Geometry and number	Cosine rule, exact trigonometric ratios, surds	1		
		10	5	Algebra	Completing the square; turning point	1 3		
			Total = 40					
28	With calculator Assessment resource J	1	4	Number and ratio, proportion, rates of change	Writing calculations efficiently	1 3	5300/04	Higher
		2	6	Number and ratio, proportion, rates of change	Depreciation in value; loan repayment (325% pa)	1 2	C300UB0	
		3	5	Ratio, proportion, rates of change	Average speed: 2-part journey	All		
		4	5	Ratio, proportion, rates of change	Variation: inverse (no context)	1 2		
		5	5	Number and ratio, proportion, rates of change	Imperial to metric units conversion problem	1 2		
		6	4	Ratio, proportion, rates of change	Real-life graphs: rise of water level in a container	2		
		7	5	Ratio, proportion, rates of change	Density and pressure	1		
		8	6	Probability	Probability of independent events	All		

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			Total = 40					
29	With calculator Assessment resource K	1	3	Geometry	Trigonometry (finding an angle)	1 2	5300/04	Higher
		2	9	Geometry	Mensuration problems: volume of sphere and volume of a cuboid; circumference of circle and perimeter of semi-circle	All	C300UB0	
		3	8	Algebra and ratio, proportion, rates of change	Temperature scale conversions	All		
		4	6	Algebra and geometry	Angles in a pentagon; forming and solving an equation	All		
		5	11	Geometry	Non-right-angled triangle trigonometric calculations; length of arc, area of sector	All		
		6	3	Algebra	Sketch graph of trigonometric function; solve trigonometric equation	2		
			Total = 40					
30	With calculator Assessment resource L	1	6	Statistics	Mean and median from grouped frequency table	1 2	5300/04	Higher
		2	13	Algebra	Quadratic functions: expand brackets, factorise and solve, factorise difference of two squares, substitution	All	C300UB0	
		3	5	Algebra	Forming and solving simultaneous linear equations	1 3		
		4	2	Algebra	n th term of quadratic sequence	1		
		5	7	Algebra and geometry	Transformations of graphs; negative enlargement	1 2		
		6	7	Algebra and geometry	Mensuration problem: use of Pythagoras to form equation, volume of a cone	1 3		
			Total = 40					
31	With calculator Assessment resource M	1	3	Algebra and geometry	Angles around a point, forming and solving an equation	1 2	5300/04	Higher
		2	9	Algebra	Quadratic functions: expand brackets, factorise and solve, factorise difference of two squares, change the subject of a formula	1 2	C300UB0	
		3	9	Algebra and geometry	Area and volume of path around a lawn	All		
		4	12	Algebra and ratio, proportion, rates of change	Factorise and solve quadratic ($ax^2 + bx + c = 0$), n th term of quadratic sequence, form and solve speed equation, completing the	All		
		5	7	Algebra and ratio, proportion, rates of change and geometry	Volume of cone and sphere; similar shapes (volume)	2 3		
			Total = 40					
32	With calculator Assessment resource N	1	3	Ratio, proportion, rates of change	Compound interest	1 2	5300/04	Higher
		2	7	Geometry	Trigonometry (finding an angle). Similar shapes (length)	1 2	C300UB0	
		3	15	Ratio, proportion, rates of change and geometry	3-part ratio calculation, percentage problem, surface area of cylinder	All		
		4	4	Geometry	Vectors: write vectors, parallel vectors	2 3		
		5	6	Geometry	Non-right-angled triangle trigonometric calculations	1 3		
		6	4	Geometry	Circle theorems: angle in a semi-circle, angles in the same segment; trigonometry (finding an angle)	2 3		
			Total = 39					
33	With calculator Assessment resource O	1	4	Ratio, proportion, rates of change	mph to km/h conversion and percentage increase	1 3	5300/04	Higher
		2	8	Statistics	Mean adjustment, mean from grouped frequency table, mean calculation problem	1 2	C300UB0	
		3	9	Number	Express one number as a percentage of another, comparison of units, bounds	1 2		
		4	5	Ratio, proportion, rates of change and geometry	Calculation of volume, density	2 3		
		5	6	Algebra	Simultaneous equations (one linear, one quadratic)	1 2		

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		6	9	Algebra and ratio, proportion, rates of change	Kinematics: interpret velocity-time graph and gradient of tangent, plot and interpret graph of quadratic function	All		
			Total = 41					
34	With calculator Assessment resource P	1	5	Ratio, proportion, rates of change	Percentages: decrease, depreciation in value	1 2	5300/04	Higher
		2	3	Statistics and ratio, proportion, rates of change	Interpreting a graph, 2-part ratio calculation	1 2	C300UB0	
		3	4	Ratio, proportion, rates of change	Ratios: 3-part ratio; fraction and 2-part ratio problem	All		
		4	4	Ratio, proportion, rates of change	Direct proportion problem	1 3		
		5	3	Number and ratio, proportion, rates of change	Standard form and density	1 2		
		6	3	Statistics	Histograms	2 3		
		7	8	Probability	Probability of dependent events; Venn diagram	All		
		8	3	Number	Bounds	1		
		9	7	Ratio, proportion, rates of change	Exponential growth	All		
			Total = 40					
35	With calculator Assessment resource Q	1	4	Geometry	Angles in a polygon problem: heptagon, isosceles triangle	2	5300/04	Higher
		2	3	Algebra and geometry	Volume of a cylinder	1 3	C300UB0	
		3	6	Geometry	Pythagoras and trigonometry (finding an angle)	1 2		
		4	4	Ratio, proportion, rates of change	Time, speed, distance calculation; change of time units	1 3		
		5	7	Geometry, number and algebra	Mensuration problem: slant height of cone, similar cones (surface area)	1 3		
		6	6	Algebra	Representing inequalities graphically	2 3		
		7	6	Geometry and number	Non-right-angled triangle trigonometric calculations	1 3		
		8	4	Algebra	Sketch graph of trigonometric function; solve trigonometric equation	1 2		
			Total = 40					
36	With calculator Assessment resource R	1	3	Probability	Expected value	1 2	5300/04	Higher
		2	5	Algebra and geometry	Forming and solving linear equations; angles in a parallelogram,	1 3	C300UB0	
		3	5	Geometry	Loci: perpendicular bisector, angle bisector	2		
		4	3	Algebra	Quadratic function: Interpreting graph	2		
		5	2	Algebra	Algebraic proof	2		
		6	5	Algebra and statistics	Mean of frequency table with simultaneous linear equations	1 3		
		7	7	Algebra	Form a quadratic equation and solve using formula	All		
		8	4	Algebra	Iteration	1		
		9	6	Algebra and geometry	Arc length and area of sector	1 3		
			Total = 40					