

A-Level Mathematics

Past-Paper Exercise Sheets — Question Index

38 subtopics • 197 questions • 1435 marks

1.1 Quadratics

5 questions, 28 marks • calculation x5

Source	Q	Type	Marks
9709/11 N25	1	calculation	4
9709/11 N25	4	calculation	6
9709/12 N25	1	calculation	5
9709/12 J25	2	calculation	4
9709/12 J25	11	calculation	9

1.2 Functions

7 questions, 51 marks • calculation x4, short answer x3

Source	Q	Type	Marks
9709/11 N25	4	calculation	6
9709/11 N25	6	calculation	7
9709/12 N25	3	short answer	5
9709/12 N25	9	calculation	8
9709/11 J25	10	short answer	12
9709/12 J25	1	short answer	4
9709/12 J25	11	calculation	9

1.3 Coordinate geometry

5 questions, 44 marks • calculation x5

Source	Q	Type	Marks
9709/11 N25	10	calculation	7
9709/12 N25	7	calculation	11
9709/11 J25	6	calculation	9
9709/11 J25	8	calculation	8
9709/12 J25	8	calculation	9

1.4 Circular measure

3 questions, 25 marks • short answer x2, calculation

Source	Q	Type	Marks
9709/11 N25	7	short answer	8
9709/12 N25	10	short answer	9
9709/11 J25	9	calculation	8

1.5 Trigonometry

5 questions, 32 marks • short answer $\times 4$, calculation

Source	Q	Type	Marks
9709/11 N25	5	short answer	7
9709/12 N25	6	short answer	9
9709/11 J25	1	calculation	4
9709/12 J25	5	short answer	5
9709/12 J25	7	short answer	7

1.6 Series

9 questions, 60 marks • calculation $\times 8$, short answer

Source	Q	Type	Marks
9709/11 N25	2	calculation	5
9709/11 N25	3	calculation	5
9709/11 N25	9	calculation	8
9709/12 N25	2	calculation	3
9709/12 N25	8	short answer	11
9709/11 J25	3	calculation	7
9709/11 J25	5	calculation	7
9709/12 J25	3	calculation	4
9709/12 J25	10	calculation	10

1.7 Differentiation

8 questions, 65 marks • calculation $\times 8$

Source	Q	Type	Marks
9709/11 N25	11	calculation	11
9709/12 N25	4	calculation	6
9709/12 N25	5	calculation	8
9709/12 N25	9	calculation	8
9709/11 J25	2	calculation	6
9709/11 J25	7	calculation	9
9709/12 J25	4	calculation	5
9709/12 J25	9	calculation	12

1.8 Integration

8 questions, 61 marks • calculation $\times 8$

Source	Q	Type	Marks
9709/11 N25	8	calculation	7
9709/11 N25	11	calculation	11
9709/12 N25	4	calculation	6
9709/12 N25	5	calculation	8
9709/11 J25	2	calculation	6
9709/11 J25	4	calculation	5
9709/12 J25	6	calculation	6
9709/12 J25	9	calculation	12

2.1 Algebra

8 questions, 59 marks • calculation $x7$, short answer

Source	Q	Type	Marks
9709/21 N25	3	calculation	6
9709/21 N25	7	calculation	11
9709/22 N25	3	calculation	7
9709/22 N25	4	calculation	6
9709/21 J25	2	calculation	6
9709/21 J25	5	calculation	9
9709/22 J25	2	short answer	5
9709/22 J25	5	calculation	9

2.2 Logarithmic and exponential functions

5 questions, 29 marks • calculation $x3$, short answer $x2$

Source	Q	Type	Marks
9709/21 N25	2	calculation	3
9709/21 N25	5	short answer	7
9709/22 N25	1	calculation	4
9709/21 J25	2	calculation	6
9709/22 J25	6	short answer	9

2.3 Trigonometry

5 questions, 36 marks • calculation $x5$

Source	Q	Type	Marks
9709/21 N25	3	calculation	6
9709/21 N25	4	calculation	5
9709/22 N25	2	calculation	5
9709/21 J25	7	calculation	9
9709/22 J25	7	calculation	11

2.4 Differentiation

9 questions, 67 marks • calculation x7, short answer x2

Source	Q	Type	Marks
9709/21 N25	6	short answer	9
9709/21 N25	8	calculation	6
9709/22 N25	5	calculation	11
9709/22 N25	7	calculation	8
9709/21 J25	1	calculation	2
9709/21 J25	4	calculation	7
9709/21 J25	6	calculation	10
9709/22 J25	3	calculation	5
9709/22 J25	6	short answer	9

2.5 Integration

8 questions, 57 marks • calculation x6, short answer x2

Source	Q	Type	Marks
9709/21 N25	1	calculation	3
9709/21 N25	5	short answer	7
9709/22 N25	5	calculation	11
9709/22 N25	6	short answer	9
9709/21 J25	4	calculation	7
9709/21 J25	7	calculation	9
9709/22 J25	1	calculation	3
9709/22 J25	4	calculation	8

2.6 Numerical solution of equations

4 questions, 35 marks • calculation x2, short answer x2

Source	Q	Type	Marks
9709/21 N25	7	calculation	11
9709/22 N25	6	short answer	9
9709/21 J25	3	short answer	7
9709/22 J25	4	calculation	8

3.1 Algebra

6 questions, 40 marks • calculation x5, short answer

Source	Q	Type	Marks
9709/31 N25	10	calculation	11
9709/31 J25	1	short answer	3
9709/31 J25	5	calculation	5
9709/31 J25	10	calculation	8
9709/32 J25	2	calculation	5
9709/32 J25	10	calculation	8

3.2 Logarithmic and exponential functions

3 questions, 13 marks • calculation $\times 2$, short answer

Source	Q	Type	Marks
9709/31 N25	2	short answer	5
9709/31 J25	2	calculation	3
9709/32 J25	1	calculation	5

3.3 Trigonometry

4 questions, 29 marks • calculation $\times 4$

Source	Q	Type	Marks
9709/31 N25	3	calculation	8
9709/31 J25	7	calculation	8
9709/32 J25	4	calculation	6
9709/32 J25	7	calculation	7

3.4 Differentiation

5 questions, 38 marks • calculation $\times 5$

Source	Q	Type	Marks
9709/31 N25	4	calculation	5
9709/31 N25	7	calculation	5
9709/31 J25	4	calculation	6
9709/31 J25	11	calculation	11
9709/32 J25	11	calculation	11

3.5 Integration

5 questions, 44 marks • calculation $\times 4$, short answer

Source	Q	Type	Marks
9709/31 N25	1	calculation	4
9709/31 J25	9	short answer	10
9709/31 J25	11	calculation	11
9709/32 J25	10	calculation	8
9709/32 J25	11	calculation	11

3.6 Numerical solution of equations

3 questions, 25 marks • short answer x3

Source	Q	Type	Marks
9709/31 N25	9	short answer	8
9709/31 J25	9	short answer	10
9709/32 J25	6	short answer	7

3.7 Vectors

3 questions, 28 marks • calculation x3

Source	Q	Type	Marks
9709/31 N25	11	calculation	10
9709/31 J25	8	calculation	9
9709/32 J25	9	calculation	9

3.8 Differential equations

3 questions, 23 marks • calculation x3

Source	Q	Type	Marks
9709/31 N25	8	calculation	8
9709/31 J25	10	calculation	8
9709/32 J25	8	calculation	7

3.9 Complex numbers

6 questions, 33 marks • short answer x3, calculation x3

Source	Q	Type	Marks
9709/31 N25	5	short answer	6
9709/31 N25	6	calculation	5
9709/31 J25	3	calculation	6
9709/31 J25	6	short answer	6
9709/32 J25	3	short answer	5
9709/32 J25	5	calculation	5

4.1 Forces and equilibrium

3 questions, 21 marks • calculation x3

Source	Q	Type	Marks
9709/41 N25	3	calculation	6
9709/42 N25	7	calculation	11
9709/41 J25	2	calculation	4

4.2 Kinematics of motion in a straight line

7 questions, 57 marks • calculation x7

Source	Q	Type	Marks
9709/41 N25	7	calculation	9
9709/42 N25	1	calculation	3
9709/42 N25	3	calculation	8
9709/42 N25	4	calculation	9
9709/42 N25	6	calculation	8
9709/41 J25	3	calculation	7
9709/41 J25	7	calculation	13

4.3 Momentum

4 questions, 27 marks • calculation x4

Source	Q	Type	Marks
9709/41 N25	2	calculation	5
9709/41 N25	6	calculation	6
9709/42 N25	4	calculation	9
9709/41 J25	5	calculation	7

4.4 Newton's laws of motion

7 questions, 42 marks • calculation x7

Source	Q	Type	Marks
9709/41 N25	1	calculation	4
9709/41 N25	5	calculation	6
9709/41 N25	8	calculation	8
9709/42 N25	2	calculation	5
9709/42 N25	5	calculation	6
9709/41 J25	1	calculation	4
9709/41 J25	6	calculation	9

4.5 Energy, work and power

5 questions, 33 marks • calculation x5

Source	Q	Type	Marks
9709/41 N25	1	calculation	4
9709/41 N25	4	calculation	6
9709/42 N25	3	calculation	8
9709/41 J25	4	calculation	6
9709/41 J25	6	calculation	9

5.1 Representation of data

3 questions, 27 marks • calculation x2, short answer

Source	Q	Type	Marks
9709/51 N25	3	calculation	8
9709/52 N25	5	short answer	7
9709/51 J25	3	calculation	12

5.2 Permutations and combinations

4 questions, 34 marks • calculation x4

Source	Q	Type	Marks
9709/51 N25	7	calculation	10
9709/52 N25	7	calculation	10
9709/51 J25	2	calculation	7
9709/51 J25	5	calculation	7

5.3 Probability

3 questions, 16 marks • calculation x2, short answer

Source	Q	Type	Marks
9709/51 N25	2	calculation	4
9709/51 N25	4	short answer	5
9709/52 N25	4	calculation	7

5.4 Discrete random variables

7 questions, 54 marks • calculation x7

Source	Q	Type	Marks
9709/51 N25	1	calculation	6
9709/51 N25	5	calculation	8
9709/52 N25	1	calculation	3
9709/52 N25	2	calculation	7
9709/52 N25	6	calculation	9
9709/51 J25	4	calculation	12
9709/51 J25	6	calculation	9

5.5 The normal distribution

4 questions, 28 marks • calculation x4

Source	Q	Type	Marks
9709/51 N25	6	calculation	9
9709/52 N25	3	calculation	7
9709/52 N25	6	calculation	9
9709/51 J25	1	calculation	3

6.1 The Poisson distribution

5 questions, 37 marks • calculation x5

Source	Q	Type	Marks
9709/61 N25	1	calculation	9
9709/61 N25	3	calculation	6
9709/62 N25	1	calculation	8
9709/61 J25	1	calculation	3
9709/61 J25	5	calculation	11

6.2 Linear combinations of random variables

4 questions, 31 marks • calculation x4

Source	Q	Type	Marks
9709/61 N25	1	calculation	9
9709/61 N25	6	calculation	10
9709/62 N25	2	calculation	6
9709/61 J25	4	calculation	6

6.3 Continuous random variables

3 questions, 24 marks • short answer x2, calculation

Source	Q	Type	Marks
9709/61 N25	7	calculation	7
9709/62 N25	5	short answer	9
9709/61 J25	7	short answer	8

6.4 Sampling and estimation

5 questions, 34 marks • calculation x5

Source	Q	Type	Marks
9709/61 N25	4	calculation	4
9709/62 N25	3	calculation	8
9709/61 J25	2	calculation	7
9709/61 J25	3	calculation	8
9709/61 J25	6	calculation	7

6.5 Hypothesis tests

6 questions, 48 marks • calculation x5, short answer

Source	Q	Type	Marks
9709/61 N25	2	calculation	8
9709/61 N25	5	short answer	6
9709/62 N25	4	calculation	7
9709/62 N25	6	calculation	12
9709/61 J25	3	calculation	8
9709/61 J25	6	calculation	7