A LEVEL MATHEMATICS B (MEI) H640



Cambridge International Resource Plus Mapping

OCR A Level Mathematics B (MEI) (H640) mapped to resources originally produced for Cambridge International AS and A Level Mathematics (9709)

There are many resources on this site that can be used when teaching OCR A Level Mathematics B (MEI). The resources include Teaching Packs (available in PDF and Word formats) containing lesson plans and activity sheets, PowerPoints for use in each lesson, interactive tools, videos and some practice questions.

The Teaching Packs have been written by classroom teachers to help deliver topics and skills that can be challenging. Use these materials to supplement your teaching and engage your students. You can also use them to help you create lesson plans for other skills. This content is designed to give you and your students the chance to explore mathematical skills. It is not intended as specific practice for exam papers. We have also produced a student version of this Resource Plus course that you can now use more flexibly to teach your students while they aren't in class. Use the student course to:

- Link students directly to materials through your own VLE or web page
- Give students access to materials without exposing the teaching resources
- Allow access to student materials on any device.

Ignore reference that graphical calculators are not permitted: Graphical calculators are permitted in UK A Level Maths but not International.

| OCR A Level Mathematics B (MEI) content | Resources | Notes |
|---|--|---|
| Algebra (1) Ma2 | Pure Mathematics 1: Quadratics | Lesson 1: Completing the square: Recap of GCSE topic. |
| Algebra (1) Ma2 Graphs (1) MC3 | | Lesson 2: Solving quadratic equations: Recap of GCSE topic and leads into solving disguised quadratic equations. |
| Algebra (1) Ma8 | | Lesson 3: Sketching quadratic functions: Recap of GCSE topic and leads into future work on transforming functions. |
| | | Lesson 4: Solving quadratic inequalities: Although this introduces this concept it does not include the requirement to express solutions in set notation. |
| Coordinate Geometry (1) Mg4 | Pure Mathematics 1: Coordinate geometry | Lesson 1: Equations of a straight line: Investigates the different standard forms to define a straight line. |
| Coordinate Geometry (1) Mg1 | | Lesson 2: Parallel, perpendicular or neither: Set of activities to develop confidence with different related sets of lines. |
| Coordinate Geometry (1) Mg7 | | Lesson 3: Problems with straight lines: Apply the properties of straight lines to problem solving questions. |
| Coordinate Geometry (1) Mg10 | | Lesson 4: Equations of circles: Develops GCSE circles about the origin to general equation of a circle expressed in either standard form. |
| Coordinate Geometry (1) Mg11 | | Lesson 5: Problems with circles: Activities to introduce the skills necessary to answer problem solving questions involving circles and lines. |

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| Trigonometry (2) Mt14 Trigonometry (2) Mt14 Trigonometry (2) Mt19 | Pure Mathematics 2: Trigonometry | Lesson 1: Solving Trigonometric equations: Covers the common error of missing solutions by cancelling common factors. Lesson 2: Solve equations with multiple/fractional angles: Focuses on identifying all solutions in the defined region. Lesson 3: Proving Identities: Focuses on determined whether to work with the LHS or RHS as the more straightforward option. |
| Vectors (1) Mv1 Vectors (1) Mv4 Vectors (1) Mv6 | Pure Mathematics 3: Vectors | Lesson 1: Notation and basics: focus is on 2D but includes notes on 3D.Lesson 2: Equation of a line: Links equations of a line to vectors in 2D.Lesson 3: Problem solving: links geometrical properties with vectors in 2D. |
| Forces (2) MF6 Forces (2) MF8 Newton's laws of motion (1) Mn4 | Mechanics: Forces and equilibrium | Lesson 1: Forces as vectors: Tackles misconception that resolving forces should only be in x and y directions (stage 2). Lesson 2: Forces in equilibrium: Focuses upon how to determine if a system is in equilibrium. Lesson 3: Newton's third law: Focus on identifying where forces are acting. |
| Further Maths | Probability and Statistics <u>1: Permutations and</u> Combinations | Further Maths |
| Further Maths | Probability and Statistics 2: The Poisson Distribution | Further Maths. |

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