

MEI Mathematics in Education and Industry
Innovators in Mathematics Education

Getting the most out of the online resources

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 online resources

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Getting the most out of the online resources

The MEI online resources
 The MEI online resources is an extensive website to support students studying A level Maths/Further Maths or FSMQ Additional Maths.

The website is designed to support students:

- Studying at a school/college with a full allocation of contact time
- Studying at a school/college with limited contact time
- Studying through the Further Mathematics Network

The website can also support students studying independently

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Modules currently available

- C1-4 (MEI)
- C1-C4 (generic)
- FP1 & 2 (AQA, Edexcel, MEI and OCR)
- FP3 (MEI)
- DE (MEI)
- M1 (AQA, Edexcel, MEI and OCR)
- M2-M4 (MEI)
- S1-3 (MEI)
- D1 (AQA, Edexcel, MEI and OCR)
- D2 (MEI)
- NM (MEI)
- FSMQ Additional Maths (separate subscription required)

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The structure of the resources

- Each module is split into chapters, mirroring the textbook
- Each chapter is split into between 1 and 5 sections, plus an additional “Teachers’ resources” section that is only available when logged in as a tutor

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Chapter resources

- Chapter assessment
- Glossary

FP1 (MEI): Chapter 1: Matrices	Working with matrices, Transformations, Multiplying matrices, Properties of matrix multiplication, Composition of transformations, Inverse matrices, Using the determinant of a 2x2 matrix, Matrices and simultaneous equations, Invariant points, Invariant lines
FP1 (MEI): Matrices 1: Introduction	Matrices, Working with matrices, Transformations
FP1 (MEI): Matrices 2: Matrix multiplication	Multiplying matrices, Properties of matrix multiplication, Composition of transformations
FP1 (MEI): Matrices 3: Inverse matrices	Inverse matrices, Using the determinant of a 2x2 matrix
FP1 (MEI): Matrices 4: Simultaneous equations	Matrices and simultaneous equations, Invariant points, Invariant lines
Chapter assessment	Please complete this once you have finished all four sections. Give it to your teacher / tutor for marking.
Glossary	This glossary covers all of this chapter.

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Section resources

Each sections contains the following:

- Menus
 - Resources
 - Interactive/Active learning resources
 - Solutions to selected textbook questions
- A section test

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Resources menu

- Study plan
- Notes and examples
- Crucial points
- Additional exercise

Detailed work plan

1. Read pages 46 – 49 carefully. You will find some help on some of the Activities in the Notes and Examples, as well as an example showing multiplication of complex numbers.
2. You can practice these techniques using the interactive questions Addition and subtraction of complex numbers, Multiplying complex numbers and Complex conjugates.
3. **Exercise 2A**
Attempt questions 1, 2, 3, 4 and 5.
In Question 2 you need only check the roots for the first one or two equations, as this is rather time consuming.
4. Read pages 50 – 53. This covers two important techniques: equating real and imaginary parts, and dividing complex numbers. There are two additional examples in the Notes and Examples, showing how these techniques can be used.

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Interactive resources

- “Teach yourself” random-question generators.
- Flash-based materials
- PowerPoints
- Spreadsheets
- Active-learning resources

Argand diagram

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Hints and solutions

- Hints
- Solutions to selected textbook questions
- Solutions to additional exercises

Complex Numbers
Exercise A

(i) $z = 2 + 3j$
 $Re(z) = 2$

(ii) $w = 6 - 4j$
 $Im(w) = -4$


(iii) $z = 2 + 3j$
 $z^* = 2 - 3j$

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Section tests

- 10 question multi-choice test
- Test questions and submission of answers is separate



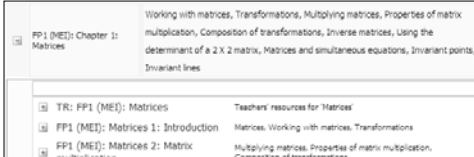
Click here to close window without taking questions

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Teachers' resources

- Full worked solutions to chapter assessments in pdf format
- Editable (Word) versions of chapter assessments
- Solutions to multi-choice tests



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Administration area

The admin area allows you to:

- Access/edit students' details (including resetting passwords)
- Add Chapter Assessment scores(!)/comments
- View/delete students' test attempts
- Add new users
- Send messages to students/classes

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Using the administration area

- The main (admin-level) tutor for each school/college has access to all students' records, other tutors can be given access to individual classes
- Students' records can be sorted and filtered

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Suggestion for ways to use the site

- As an integral part of the course
- As a "revision site"
- As an "extra" resource for teachers/students

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Encouraging students to use the site

- Have students work through a whole chapter/section from the resources independently
- Make it clear that students should use the site at their first "port-of-call" when they are stuck
 - Notes & examples
 - Solutions
 - Interactive questions
- Make students attempt a multi-choice test early during the course
- Use the multi-choice tests as a regular homework
- Give students the paper version of the test and enter the results as a class
- Allow students to sit additional/alternative modules
