

MEI Online Resources for Mathematics

Instructions

You can log-in to the resources at www.resources.mei.org.uk. Once logged-in you will be taken to the Home page. The grey information bar at the top of every page contains your name, a link back to the home page, a Change Password link and a Log Out button.



1 Changing your password

Click the Change Password link, you will need to re-enter your username and (old) password as this is a secure area of the site. Once you have changed your password click the “Save information” button and then follow the link back to the Home page.

Your tutor can reset your password should you forget it.

2 The Home Page

Chapter	Notes	Score /100
D1:	A good effort.	
Chapter 2:	Please revise the standard	75
Graphs	definitions.	

2.1 My Modules

The resources are designed for you to access the modules you are studying easily. To add a module to your “My Modules” list follow the “Add module to My Modules list” link, select the module and click “Add”. When you have added your modules press the button to close the window and refresh the main page. You can add or delete

modules at a later date.

2.2 Messages

Individual messages sent to you from your tutor are displayed on the Home page. You can delete these once you have read them.

2.3 Class Messages

Messages to your class are displayed on the Home page. Your tutor can delete these.

2.4 Site News

This contains up-to-date information about which modules have resources available on the site.

2.5 Student Tests and Assessments

Scores for section tests (out of 30) are listed for each module. To display the scores “expand” the module by clicking the +. To view the answers submitted at a previous attempt click on the test name.

			Score (* / 30)
<input type="checkbox"/>	Module: Decision 1 (MEI)		
	Decision 1 (MEI)	Graphs 1	11
	Decision 1 (MEI)	Networks 1	30
<input type="checkbox"/>	Module: Further Pure Mathematics 1 (MEI)		

Chapter assessment scores recorded by your tutor are also displayed.

3 The Resources Page

Each module's resources have a chapter structure, which mirrors its textbook.

NB For modules which do not have a single recommended textbook, i.e. the Generic Core resources (AS and A2) and the AQA resources, the topics of the module are listed as "Chapters".

To expand a chapter click on the + next to the chapter name.

Additional resources for the module (such as past papers) are displayed in the tabs at the top of the page.

Click here to expand the chapter

Additional resources in tabs

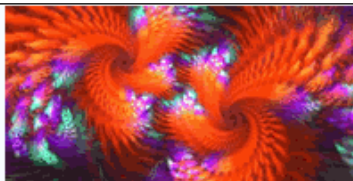
Further Pure Mathematics 1 (MEI)

January 2005 Past Paper

June 2005 Past Paper

Chapters:

<div style="text-align: center;">+</div> 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 2 X 2 matrix, Matrices and simultaneous equations, Invariant points, Invariant lines
<div style="text-align: center;">+</div> FP1 (MEI): Chapter 2: Complex numbers	The growth of the number system, Working with complex numbers, Representing complex numbers geometrically, Sets of points in an Argand diagram, The modulus-argument form of complex numbers, Sets of points using the modulus-argument form, Complex numbers and equations
<div style="text-align: center;">+</div> FP1 (MEI): Chapter 3: Graphs and inequalities	Graphs of rational functions, Inequalities, The range of values taken by a function
<div style="text-align: center;">+</div> FP1 (MEI): Chapter 4: Algebra: identities and roots of equations	Identities, Properties of the roots of polynomial equations
<div style="text-align: center;">+</div> FP1 (MEI): Chapter 5: Induction and series	Induction in mathematics, Proof by induction, More proofs by induction, Summation of finite series












3.1 Chapter Resources

Each chapter has:

A **Chapter Assessment**, made up of exam standard questions covering the material addressed by the chapter. You should treat these as open-book exams and aim to score at least 80%. This is work that students would typically hand to their tutors to gain feedback.

A **Glossary**, which gives definitions of the mathematical terms used in the chapter, in the context of the work covered.

	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 2 X 2 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	
	 Matrices chapter assessment	Please complete this once you have finished all four sections. Give it to your teacher / tutor for marking.
	:: Glossary	
	 Glossary	This glossary covers all of this chapter.

Each chapter has its resources divided into sections (between 1 and 5, depending on the module and chapter). These sections have a common structure and are designed to be mathematically coherent chunks of work. They are not intended necessarily to take equal amounts of time or effort; they just break the work in each chapter into manageable sections.

To expand a section click on the + next to the section name.

3.2 Section Resources






Each section contains:

"*Before you start...*" – describing the material you should know before you start studying the section.

"*When you have finished you should...*" – describing what you should learn whilst studying the section.

Each section also contains the following menus:

Resources, containing

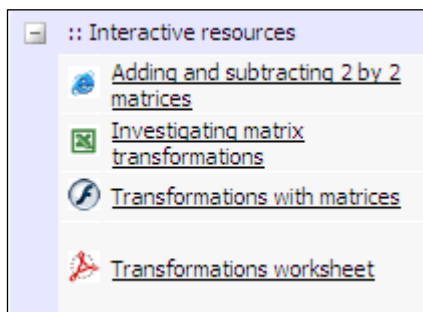
	:: Resources
	 Study plan
	 Notes and examples
	 Crucial points
	 Additional Exercises

- A **Study plan**, which gives some background and introduction to the mathematics covered in the section. It details what reading should be done from the textbook and where/how the supplementary notes and other section resources could be used. It also suggests questions to attempt from the textbook exercises covered in the section.

- Some **Notes and examples**, which expand textbook examples and often give extra explanations, tips and examples. Sometimes they also include extension material.
- A **Crucial points** section, which lists the common mistakes students make with the mathematics covered in the section and explains why they are wrong.
- Many sections also feature **Additional exercises** of questions not featured in any textbooks.

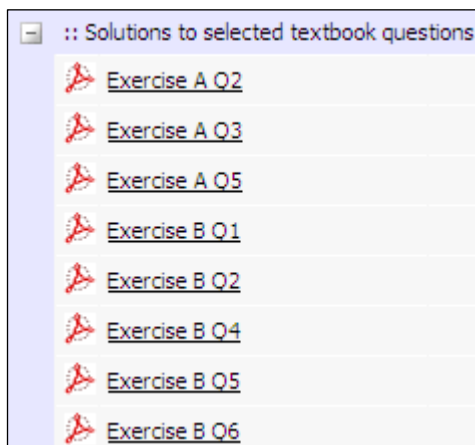
Interactive resources, Active learning resources

Many sections have interactive resources and/or active learning resources. These are intended to enhance your learning of the mathematics covered. Types of resources available include:



- “Teach yourself” random-question generators.
- Flash-based materials for students to investigate with, or for use with an IWB
- PowerPoints
- Spreadsheets
- Active-learning style activities such as hexagonal jigsaws and dominoes.

Hints and solutions



These are available for the additional exercises and also specified questions in the MEI textbooks. These solutions provide more help than the answers as they are presented in the back of the textbooks, Each question specified in a section has a fully worked solution and many questions also have hints. There are up to three levels of hint per question. The first level of hint should point you in the right direction; the next level gives a little more help and level 3 even more. The worked solutions are also useful to show you how to set out clear answers to mathematical questions. Usually they are hand-written, to show you what is expected in your own solutions.

3.3 Section Tests

Each section features a multiple-choice test, which covers all of the mathematics you should have learned in the section. Each test has 10 questions with options A, B, C, D & E (where E is Skip). You will score 3 marks for a correct answer, 1 for "I don't know" and 0 for guessing. The pass mark is 23/30.

Tests take between 30 and 90 minutes each. They should be printed from the web site and worked out on paper.

Your choices are entered onto a form accessed from the section page on the web site. This allows immediate feedback on your score including which questions were answered incorrectly and, if the pass mark has been achieved, worked solutions.

Test	Test Questions
Submit answers	Matrices 1
When you have completed this section, attempt the multiple choice test.	

To access the test questions click on the test name. The questions are presented as a single pdf document. When you have answered the questions on paper you can submit your answers by following the "Submit Answers" link. You will need to log-in to the site again so that the site can verify your identity.

Select A, B, C, D or Skip for each question and then press the "Submit your answers" button.

The screenshot shows a test interface with 10 questions. Each question has a dropdown menu for selecting an answer. The options are A, B, C, D, and Skip. A red button labeled "Submit your answers" is located at the bottom center. Below the button is a link: "Click here to close window without taking questions".

If you fail a test twice, you cannot re-take it until your tutor has reset your attempts. This is to encourage you to discuss the section with your tutor if you are having difficulty with it.

Each time a test is taken the responses and score are written to your record on a database, which can be accessed by your tutor. Tutors can also enter assessment scores and comments onto your records. You can access your own test records from the Home page.

Distracters (the wrong answers) are chosen, where possible, to anticipate the errors you are likely to make. This means the tests are very useful for diagnostic purposes.

3.4 Teachers' Resources

Each chapter contains a section of Teachers' Resources which are only available when logged-on as a tutor.

The Teachers' resources are listed above the sections for each chapter.

-	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 2 X 2 matrix, Matrices and simultaneous equations, Invariant points, Invariant lines
+	TR: FP1 (MEI): Matrices	Teachers' resources for 'Matrices'
+	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

These contain full worked solutions of the chapter assessments in pdf format, editable versions of the chapter assessments in Word format and full worked solutions to the multiple-choice tests.