

# FURTHER MATHEMATICS

## End-of-year examination 1 (Facts, skills and applications task)

### Description

Examination time – 1½ hours

Contribution to study score – 33%

Approved materials and equipment – Pencil to use on multiple-choice answer sheet. One approved graphics calculator and/or one scientific calculator. Ruler, protractor, set-square and aids for curve-sketching. Up to 4 pages (two A4 sheets) of notes, which may be typed or handwritten and from any source. A detachable sheet of miscellaneous formulas is provided.

Examination 1 ‘Facts, skills and applications task’ is based on material specified in the Study Design for Units 3 and 4. Its purpose is to assess student performance on the outcomes and associated key knowledge and skills. Outcome 3 will not be assessed separately from Outcomes 1 and 2.

Examination 1 principally relates to Outcome 1.

The task requires each student to answer multiple-choice questions covering the core and the three selected ‘Applications’ modules.

The task is designed to assess students’ knowledge of mathematical concepts, their skills in carrying out mathematical algorithms and their ability to apply concepts and skills in standard ways.

Student access to an approved graphics calculator will be assumed by the setting panel.

### Examination criteria

The examination will address all of the criteria. All students will be examined against each criterion.

1. knowledge and use of mathematical conventions, symbols and terminology
2. understanding of key terms and mathematical concepts as defined in the Study Design
3. skill in the accurate application of mathematical techniques
4. knowledge of mathematical concepts and the application of mathematical processes in standard ways
5. knowledge of the application and effective use of technology

# FURTHER MATHEMATICS

## End-of-year examination 2 (Analysis task)

### Description

Examination time – 1½ hours

Contribution to study score – 33%

Approved materials and equipment – One approved graphics calculator and/or one scientific calculator. Ruler, protractor, set-square and aids for curve-sketching. Up to 4 pages (two A4 sheets) of notes, which may be typed or handwritten and from any source. A detachable sheet of miscellaneous formulas is provided.

Examination 2 ‘Analysis task’ is based on material specified in the Study Design for Units 3 and 4. Its purpose is to assess student performance on the outcomes and associated key knowledge and skills. Outcome 3 will not be assessed separately from Outcomes 1 and 2. Examination 2 principally relates to Outcome 2.

The task requires each student to answer four sets of extended-answer questions, equally weighted from the Core, ‘Data analysis’, and the three selected ‘Applications’ modules.

The task is designed to assess students’ ability to understand and communicate mathematical ideas, and to interpret, analyse and solve both routine and non-routine problems.

Student access to an approved graphics calculator will be assumed by the setting panel.

### Examination criteria

The examination will address all of the criteria. All students will be examined against each criterion.

1. knowledge and use of mathematical conventions, symbols and terminology
2. skill in accurate application of mathematical techniques
3. skill in identification of important information, variables and constraints
4. knowledge of mathematical ideas and content and the interpretation, analysis and solution of both routine and non-routine problems
5. knowledge of the application and effective use of technology

# MATHEMATICAL METHODS

## End-of-year examination 1 (Facts, skills and applications task)

### Description

Examination time – 1½ hours

Contribution to study score – 33%

Approved materials and equipment – Pencil to use on multiple-choice sheet. One approved graphics calculator and/or one scientific calculator. Ruler, protractor, set-square and aids for curve-sketching. Up to 4 pages (two A4 sheets) of notes, which may be typed or handwritten and from any source. A detachable sheet of miscellaneous formulas is provided.

Examination 1 ‘Facts, skills and applications task’ is based on material specified in the Study Design for Units 3 and 4. Its purpose is to assess student performance on the outcomes and associated key knowledge and skills. Outcome 3 will not be assessed separately from Outcomes 1 and 2.

Examination 1 principally relates to Outcome 1

The task requires each student to answer multiple-choice questions and short-answer questions covering all areas of the study.

The task is designed to assess students’ knowledge of mathematical concepts, their skills in carrying out mathematical algorithms and their ability to apply concepts and skills in standard ways.

Student access to an approved graphics calculator will be assumed by the setting panel.

### Examination criteria

The examination will address all of the criteria. All students will be examined against each criterion.

1. knowledge of the use of mathematical conventions, symbols and terminology
2. understanding of key terms and mathematical concepts as defined in the Study Design
3. skill in the accurate application of mathematical techniques
4. knowledge of mathematical concepts and the application of mathematical processes in standard ways
5. knowledge of the application and effective use of technology

# MATHEMATICAL METHODS

## End-of-year examination 2 (Analysis task)

### Description

Examination time – 1½ hours

Contribution to study score – 33%

Approved materials and equipment – One approved graphics calculator and/or one scientific calculator. Ruler, protractor, set-square and aids for curve-sketching. Up to 4 pages (two A4 sheets) of notes, which may be typed or handwritten and from any source. A detachable sheet of miscellaneous formulas is provided.

Examination 2 ‘Analysis task’ is based on material specified in the Study Design for Units 3 and 4. Its purpose is to assess student performance on the outcomes and associated key knowledge and skills. Outcome 3 will not be assessed separately from Outcomes 1 and 2. Examination 2 principally relates to Outcome 2.

The task requires each student to answer a collection of extended-answer questions.

The task is designed to assess students’ ability to understand and communicate mathematical ideas, and to interpret, analyse and solve both routine and non-routine problems.

Student access to an approved graphics calculator will be assumed by the setting panel.

### Examination criteria

The examination will address all of the criteria. All students will be examined against each criterion.

1. knowledge and use of mathematical conventions, symbols and terminology
2. skill in the accurate application of mathematical techniques
3. skill in identification of important information, variables and constraints
4. knowledge of mathematical ideas and content to interpret, analyse and solve both routine and non-routine problems
5. knowledge of the application and effective use of technology

# SPECIALIST MATHEMATICS

## End-of-year examination 1 (Facts, skills and applications task)

### Description

Examination time – 1½ hours

Contribution to study score – 33%

Approved materials and equipment – Pencil to use on multiple-choice answer sheet. One approved graphics calculator and/or one scientific calculator. Ruler, protractor, set-square and aids for curve-sketching. Up to 4 pages (two A4 sheets) of notes, which may be typed or handwritten and from any source. A detachable sheet of miscellaneous formulas is provided.

Examination 1 ‘Facts, skills and applications task’ is based on material specified in the Study Design for Units 3 and 4. Its purpose is to assess student performance on the outcomes and associated key knowledge and skills. Outcome 3 will not be assessed separately from Outcomes 1 and 2.

Examination 1 principally relates to Outcome 1.

The task requires each student to answer multiple-choice questions and short-answer questions covering all areas of the study.

The task is designed to assess students’ knowledge of mathematical concepts, their skills in carrying out mathematical algorithms and their ability to apply concepts and skills in standard ways.

Student access to an approved graphics calculator will be assumed by the setting panel.

### Examination criteria

The examination will address all of the criteria. All students will be examined against each criterion.

1. knowledge and use of mathematical conventions, symbols and terminology
2. understanding of key terms and mathematical concepts as defined in the Study Design
3. skill in the accurate application of mathematical techniques
4. knowledge of mathematical concepts and the application of mathematical processes in standard ways
5. knowledge of the application and effective use of technology

# SPECIALIST MATHEMATICS

## End-of-year examination 2 (Analysis task)

### Description

Examination time – 1½ hours

Contribution to study score – 33%

Approved materials and equipment – One approved graphics calculator and/or one scientific calculator. Ruler, protractor, set-square and aids for curve-sketching. Up to 4 pages (two A4 sheets) of notes, which may be typed or handwritten and from any source. A detachable sheet of miscellaneous formulas is provided.

Examination 2 ‘Analysis task’ is based on material specified in the Study Design for Units 3 and 4. Its purpose is to assess student performance on the outcomes and associated key knowledge and skills. Outcome 3 will not be assessed separately from Outcomes 1 and 2. Examination 2 principally relates to Outcome 2.

The task requires each student to answer a collection of extended-answer questions.

The task is designed to assess students’ ability to understand and communicate mathematical ideas, and to interpret, analyse and solve both routine and non-routine problems.

Student access to an approved graphics calculator will be assumed by the setting panel.

### Examination criteria

The examination will address all of the criteria. All students will be examined against each criterion.

1. knowledge and use of mathematical conventions, symbols and terminology
2. skill in the accurate application of mathematical techniques
3. skill in identification of important information, variables and constraints
4. knowledge of mathematical ideas and content and the interpretation, analysis and solution of both routine and non-routine problems
5. knowledge of the application and effective use of technology