

Specification

Functional Skills Mathematics Levels 1 & 2

Functional Skills Onscreen On-demand Testing

In addition to the fixed assessment opportunities throughout the year, we are now offering onscreen on-demand tests for functional skills in English (Reading and Writing) and mathematics across Level 1 and 2 qualifications.

The benefits of Onscreen testing for you:

- The onscreen test may be taken at any time of the year by arrangement with Edexcel.
- Registered learners can be booked onto the onscreen test any time up until two hours beforehand.
- Tests are easy to administer.
- No internet connection is required during testing, increasing test security.
- Installation of software is free.
- There is no registration fee; centres are only charged for learners that completed the test.

For your learner

- Tests are available on-demand and can be taken when they are ready.
- Results will be available via edexcel online within four weeks of Edexcel receiving the test file.
- Candidates can be entered to re-sit on the same day the initial results are received, or as soon as they are ready.
- Tests can be taken in a non-traditional exam environment, making the tests more engaging for some learners.

Technical requirements

A Technical Requirements Form will need to be completed which can be found at www.edexcel.com/onscreen-new. Alternatively you can contact us on 08445760024 where you will be able to speak to one of our Onscreen Technical Advisors.

Specification

Edexcel Levels 1 and 2

**Edexcel Functional Skills qualification in Mathematics
at Level 1 (FSM01)**

**Edexcel Functional Skills qualification in Mathematics
at Level 2 (FSM02)**

For first teaching September 2010

Issue 2

Edexcel, a Pearson company, is the UK's largest awarding body, offering academic and vocational qualifications and testing to more than 25,000 schools, colleges, employers and other places of learning in the UK and in over 100 countries worldwide. Qualifications include GCSE, AS and A Level, NVQ and our BTEC suite of vocational qualifications from entry level to BTEC Higher National Diplomas, recognised by employers and higher education institutions worldwide.

We deliver 9.4 million exam scripts each year, with more than 90% of exam papers marked onscreen annually. As part of Pearson, Edexcel continues to invest in cutting-edge technology that has revolutionised the examinations and assessment system. This includes the ability to provide detailed performance data to teachers and students which helps to raise attainment.

This specification is Issue 2. We will inform centres of any changes to this issue. The latest issue can be found on the Edexcel website: www.edexcel.com

References to third party material made in this specification are made in good faith. Edexcel does not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)

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Qualification titles covered by this specification

Edexcel Functional Skills qualification in Mathematics at Level 1

Edexcel Functional Skills qualification in Mathematics at Level 2

These qualifications have been accredited onto the National Qualifications Framework (NQF) and are eligible for public funding as determined by the Department for Education (DfE) under Sections 96 and 97 of the Learning and Skills Act 2000.

The qualification titles listed above feature in the funding lists published annually by the DfE and the regularly updated website www.education.gov.uk/. The Qualifications Accreditation Number (QAN) should be used by centres when they wish to seek public funding for their learners.

These qualification titles and codes will appear on learners' certificates. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel.

The QANs for the qualifications in this publication are:

Edexcel Functional Skills qualification in Mathematics at Level 1	500/8906/7
Edexcel Functional Skills qualification in Mathematics at Level 2	500/8907/9

Structure of qualifications

Edexcel Functional Skills qualification in Mathematics at Level 1

Mathematics Level 1	
<ul style="list-style-type: none">Externally assessedAssessment is available either onscreen or paper basedAvailability: please see the Edexcel website for detailsFirst assessment: November 2010	100% of the total qualification
Overview of content <ul style="list-style-type: none">Representing using mathematicsAnalysing situations mathematicallyInterpreting solutions to problems using mathematicsCoverage of mathematical content in number, geometry and statistics	
Overview of paper-based assessment <ul style="list-style-type: none">Three themes in each testTest time will be 1 hour and 30 minutesThe total number of marks available is 48	
Overview of onscreen assessment <ul style="list-style-type: none">Test time will be 1 hour and 30 minutesThe total number of marks available is 40Test is available on demand by arrangement with Edexcel	

Edexcel Functional Skills qualification in Mathematics at Level 2

Mathematics Level 2	
<ul style="list-style-type: none"> • Externally assessed • Assessment is available either onscreen or paper based • Availability: please see the Edexcel website for details • First assessment: November 2010 	100% of the total qualification
<p>Overview of content</p> <ul style="list-style-type: none"> • Representing using mathematics • Analysing situations mathematically • Interpreting solutions to problems using mathematics • Coverage of mathematical content in number, algebra, geometry and statistics 	
<p>Overview of paper-based assessment</p> <ul style="list-style-type: none"> • Three themes in each test • Test time will be 1 hour and 30 minutes • The total number of marks available is 48 	
<p>Overview of onscreen assessment</p> <ul style="list-style-type: none"> • Test time will be 1 hour and 30 minutes • The total number of marks available is 40 • Test is available on demand by arrangement with Edexcel 	

Functional Skills qualification in Mathematics at Level 1

NQF level: 1
Guided learning hours: 45

Process skills

The Level 1 Functional Skills qualification in Mathematics assesses the following three interrelated process skills:

Representing – selecting the mathematics and information to model a situation	Analysing – processing and using mathematics	Interpreting – interpreting and communicating the results of the analysis
<ul style="list-style-type: none">• Learners recognise that a situation has aspects that can be represented using mathematics.• Learners make an initial model of a situation using suitable forms of representation.• Learners decide on the methods, operations and tools, including ICT, to use in a situation.• Learners select the mathematical information to use.	<ul style="list-style-type: none">• Learners use appropriate mathematical procedures.• Learners examine patterns and relationships.• Learners change values and assumptions or adjust relationships to see the effects on answers in models.• Learners find results and solutions.	<ul style="list-style-type: none">• Learners interpret results and solutions.• Learners draw conclusions in light of situations.• Learners consider the appropriateness and accuracy of results and conclusions.• Learners choose appropriate language and forms of presentation to communicate results and solutions.

At level 1, the skills standards and coverage and range subsume the skill standards and the indicative coverage and range at Entry 3, supporting progression from Entry 3 to level 2.

Skill standards

In order to pass this qualification, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the skill standards for the qualification.

The coverage and range determine the mathematical content learners should be able to use in functional contexts in order to achieve the qualification.

On completion of this qualification a learner should:

Skill standards	Weighting of assessment
<p>1 Representing</p> <ul style="list-style-type: none"> • understand practical problems in familiar and unfamiliar contexts and situations, some of which are non-routine • identify and obtain necessary information to tackle the problem • select mathematics in an organised way to find solutions 	30-40%
<p>2 Analysing</p> <ul style="list-style-type: none"> • apply mathematics in an organised way to find solutions to straightforward practical problems for different purposes • use appropriate checking procedures at each stage 	30-40%
<p>3 Interpreting</p> <ul style="list-style-type: none"> • interpret and communicate solutions to practical problems, drawing simple conclusions 	

explanations.

Coverage and range

A learner should be able to:

- understand and use whole numbers and understand negative numbers in practical contexts
- add, subtract, multiply and divide whole numbers using a range of strategies
- understand and use equivalences between common fractions, decimals and percentages
- add and subtract decimals up to two decimal places
- solve simple problems involving ratio, where one number is a multiple of the other
- use simple formulae expressed in words for one- or two-step operations
- solve problems requiring calculation, with common measures, including money, time, length, weight, capacity and temperature
- convert units of measure in the same system
- work out areas and perimeters in practical situations
- construct geometric diagrams, models and shapes
- extract and interpret information from tables, diagrams, charts and graphs
- collect and record discrete data and organise and represent information in different ways
- find mean and range
- use data to assess the likelihood of an outcome.

Assessment structure for paper-based test at Level 1

Assessment	One external paper-based assessment.
Tasks	Three sections in each assessment. Each section has a theme.
Assessment duration	1 hour 30 minutes.
Marks	16 marks per section. 48 marks in total.
Additional information	Calculators are allowed. All coverage and range will be assessed over one year.

Assessment structure for onscreen test at Level 1

Assessment	One external onscreen assessment.
Assessment duration	1 hour 30 minutes.
Marks	40 marks in total.
Additional information	Calculator is provided onscreen – no calculator may be brought to examination All coverage and range will be assessed over one year.

Sampling of coverage and range

Coverage and range of the qualification will be sampled over one year of external assessment series.

Functional Skills qualification in Mathematics at Level 2

NQF level: 2
Guided learning hours: 45

Process skills

The Level 2 Functional Skills qualification in Mathematics assesses the following three interrelated process skills.

Representing – selecting the mathematics and information to model a situation	Analysing – processing and using mathematics	Interpreting – interpreting and communicating the results of the analysis
<ul style="list-style-type: none">• Learners recognise that a situation has aspects that can be represented using mathematics.• Learners make an initial model of a situation using suitable forms of representation.• Learners decide on the methods, operations and tools, including ICT, to use in a situation.• Learners select the mathematical information to use.	<ul style="list-style-type: none">• Learners use appropriate mathematical procedures.• Learners examine patterns and relationships.• Learners change values and assumptions or adjust relationships to see the effects on answers in models.• Learners find results and solutions.	<ul style="list-style-type: none">• Learners interpret results and solutions.• Learners draw conclusions in light of situations.• Learners consider the appropriateness and accuracy of results and conclusions.• Learners choose appropriate language and forms of presentation to communicate results and solutions.

At level 2, the skills standards and coverage and range subsume the skills standards and the indicative coverage and range at level 1, supporting progression from level 1.

Skill standards

In order to pass this qualification, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the skill standards for the qualification.

The coverage and range determine the mathematical content learners should be able to use in functional contexts in order to achieve the qualification.

On completion of this qualification a learner should:

Skill standards	Weighting of assessment
1 Representing <ul style="list-style-type: none">• understand routine and non-routine problems in familiar and unfamiliar contexts and situations• identify the situation or problems and identify the mathematical methods needed to solve them• select a range of mathematics to find solutions	30-40%
2 Analysing <ul style="list-style-type: none">• apply a range of mathematics to find solutions• use appropriate checking procedures and evaluate their effectiveness at each stage	30-40%
3 Interpreting <ul style="list-style-type: none">• interpret and communicate solutions to multistage practical problems in familiar and unfamiliar contexts and situations• draw conclusions and provide mathematical justifications.	30-40%

Coverage and range

A learner should be able to:

- understand and use positive and negative numbers of any size in practical contexts
- carry out calculations with numbers of any size in practical contexts, to a given number of decimal places
- understand, use and calculate ratio and proportion, including problems involving scale
- understand and use equivalences between fractions, decimals and percentages
- understand and use simple formulae and equations involving one or two operations
- recognise and use 2-D representations of 3-D objects
- find area, perimeter and volume of common shapes
- use, convert and calculate using metric and, where appropriate, imperial measures
- collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate
- use and interpret statistical measures, tables and diagrams, for discrete and continuous data, using information and communication technology (ICT) where appropriate
- use statistical methods to investigate situations
- use probability to assess the likelihood of an outcome.

Assessment structure for paper-based test at Level 2

Assessment	One external paper-based assessment.
Tasks	Three sections in each assessment. Each section has a theme.
Assessment duration	1 hour 30 minutes.
Marks	16 marks per section. 48 marks in total.
Additional information	Calculators are allowed. All coverage and range will be assessed over one year.

Assessment structure for onscreen test at Level 2

Assessment	One external onscreen assessment.
Assessment duration	1 hour 30 minutes.
Marks	40 marks in total.
Additional information	Calculator is provided onscreen – no calculator may be brought to examination All coverage and range will be assessed over one year.

Sampling of coverage and range

Coverage and range of the qualification will be sampled through external assessment series.

Assessment

Assessment summary

The Edexcel Functional Skills qualifications in Mathematics at Levels 1 and 2 are externally assessed.

Assessment opportunities for paper-based test

There will be up to eight assessment windows each year. Assessments are available within a 5-day window. Please see our website (www.edexcel.com) for further details.

Security arrangement for 5-day windows

Assessment is available within a five-day window. The following requirements must be adhered to:

- the dates of the window will be published by Edexcel
- test sittings must be scheduled to minimise the possibility of learners colluding
- centres must produce a schedule showing the date and time of each examination session to be held in the window. This schedule must be submitted in writing to Edexcel's Compliance and Quality Services Department
- each paper must be collected in, accounted for and held securely until the end of the window
- learners may only sit the test once in each window
- teaching of the subject should be suspended for the duration of the window
- learners must sign a declaration when they sit the test to confirm they understand they are not allowed to discuss the contents of the test until the end of the window.

Assessment opportunities for onscreen test

The onscreen test may be taken at any time of the year by arrangement with Edexcel.

Inclusion information for Mathematics

Learners can have access to all forms of equipment, software and practical assistance, such as a reader or a scribe, that reflect their normal way of working, provided that these do not affect the reliability or validity of assessment outcomes or give the learner an assessment advantage over other learners undertaking the same or similar assessments.

The following access arrangements may be requested.

- Extra time.
- Reader.
- Oral language modifier.
- Sign language interpreter.
- Scribe.
- Word processor.
- Transcript.
- Practical assistant.
- Modified question papers (including Braille).
- Models, visual/tactile aids, speaking scales.

No arrangements for exemptions exist for functional skills in Mathematics.

Entry, awarding and reporting

Learner entry

Details of learner entry requirements, and the number of assessment opportunities, can be found in our *Information Manual*, which is sent to all examinations officers. Our Information Manual is updated regularly and can be found on our website (www.edexcel.com).

Awarding and reporting

The awarding and certification of this qualification will comply with the requirements of the Office of the Qualifications and Examinations Regulator (Ofqual). The qualification will be awarded as a pass or fail. The result for a learner who fails to reach the minimum standard for a pass to be awarded will be recorded as U (unclassified) and will not be certificated.

The first certification opportunity for the Edexcel Functional Skills qualifications in Mathematics will be November 2010.

Qualification results

Learners must pass the assessment to be awarded a qualification pass.

Cash-in code

Level 1	Paper based	Onscreen
Cash in code	FSM01	MAT01

Level 2	Paper based	Onscreen
Cash in code	FSM02	MAT02

Resitting

If learners fail a qualification they may resit the assessment.

Language of assessment

Assessment of this qualification will be available in English only. Assessment materials will be published in English only and all work submitted for examination and moderation must be produced in English.

Malpractice and plagiarism

For up-to-date advice on malpractice and plagiarism, please refer to the Joint Council for Qualifications *Suspected Malpractice in Examinations: Policies and Procedures* document on the JCQ website (www.jcq.org.uk).

Learner recruitment

Edexcel's access policy concerning recruitment to our qualifications is that:

- they must be available to anyone who is capable of reaching the required standard
- they must be free from barriers that restrict access and progression
- equal opportunities exist for all learners.

Progression

Learners could progress from these qualifications to:

- GCSE in Mathematics or GCSE in Statistics
- other related qualifications.

Annexe A

Codes

Type of code	Use of code	Code number
National Qualifications Framework (NQF) codes	<p>Each qualification title is allocated an Ofqual National Qualifications Framework (NQF) code.</p> <p>The Ofqual National Qualifications Framework (NQF) code is known as a Qualification Accreditation Number (QAN). This is the code that features in the DCSF Funding Schedule, Sections 96 and 97, and is to be used for all qualification funding purposes. The Ofqual QAN is the number that will appear on the learner's final certification documentation.</p>	<p>The QANs for the qualifications in this publication are:</p> <p>Level 1 – 500/8906/7</p> <p>Level 2– 500/8907/9</p>
Cash-in codes	<p>The cash-in code is used as an entry code to aggregate the learner's unit scores to obtain the overall grade for the qualification. Centres will need to use the entry codes only when entering learners for their qualification.</p>	<p>Level 1 – FSM01 paper based</p> <p>Level 1 – MAT01 onscreen</p> <p>Level 2– FSM02 paper based</p> <p>Level 2 – MAT02 onscreen</p>
Entry codes	<p>The entry codes are used to:</p> <ul style="list-style-type: none"> enter a learner for the assessment of a qualification/component aggregate the learner's unit scores to obtain the overall grade for the qualification. 	<p>Please refer to the Edexcel <i>Information Manual</i>, available on the Edexcel website.</p>

Annexe B

Glossary of qualification format terms

All Edexcel functional skills qualifications have a standard format. The format is designed to give the requirements of the qualification for learners, tutors, assessors and those responsible for monitoring national standards.

Each qualification has the following sections.

Qualification title

The title is accredited on the National Qualifications Framework (NQF) and this form of words will appear on the learner's Notification of Performance (NOP).

NQF level

All units and qualifications within the NQF will have a level assigned to them, which represents the level of achievement. There are nine levels of achievement, from Entry level to level 8. The level of the unit has been informed by the NQF level descriptors.

GLH

This is the guided learning hours required to teach the qualification.

Cash-in code

This is the Edexcel code required to claim certification for the whole qualification after completion of all components.

Process skills

Process skills require learners to represent, analyse and interpret using mathematics. The process skills are assessed through the skills standards.

Skill standard

The skill standard of a qualification sets out the functional skills that learners are expected to achieve as the result of a process of learning.

Coverage and range

The coverage and range specifies the mathematics content the learner should be able to apply to demonstrate a skill standard. The skill standard and coverage and range articulate the learning achievement which will be awarded at the level assigned to the qualification.

Assessment structure

This includes details of the component/s of assessment and the key features of each component.

Sampling of coverage and range

This includes details of how coverage and range will be sampled over assessment series.

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