

Learner Guide

Functional Skills Maths Qualifications
Level 1 and 2

Section 1: About these qualifications

This learner guide contains details of all the content and assessments required to complete these qualifications.

Entry guidance

These qualifications are designed for learners who want to improve their everyday mathematics abilities in preparation for life and work. The qualifications may also be studied by learners as part of their vocational apprenticeship.

There are no specific recommended prior learning requirements for these qualifications. Centres are responsible for ensuring that the qualifications are appropriate for the age and ability of learners.

Achieving these qualifications

Functional Skills Mathematics qualifications at Levels 1–2 are comprised of one mandatory external assessment per level.

For a learner to achieve the qualification and be awarded their certificate, that learner must obtain a Pass grade in the assessment based on the combined marks from both sections of the assessment.

Functional Skills pass boundaries are available to download from each Functional Skills qualification page.

How the qualifications are assessed

External assessments are designed by NCFE and scheduled by the centre. Upon completion of the assessment, the assessment is marked by NCFE.

External assessment

The external assessments are comprised of a short-answer question paper, set and marked by NCFE. The assessment assesses learners' knowledge, understanding and skills based on the subject content of these qualifications.

Mathematics Level 1 and Level 2 assessment

These qualifications are comprised of a single assessment with 2 separate sections. Both sections of the assessment must be completed in one continuous sitting.

Assessment

Assessments at Level 1 and Level 2 share the same structure, which is as follows:

| | Activity | | Marks | Duration |
|-----------|----------|--|-------|-------------|
| Section A | 1 | Non-calculator The tasks in this section are designed to be completed without a calculator. Calculators are not permitted. | 15 | 30 minutes |
| Section B | 2 | Calculator The use of a calculator is permitted in this section. | 15 | 90 minutes |
| | 3 | | 15 | |
| | 4 | | 15 | |
| | | | 60 | 120 minutes |

Activities are comprised of multiple tasks covering all strands of mathematics, and each activity is comprised of a different contextual theme.

The non-calculator section can assess any content that does not specifically require a calculator.

On demand assessment

Centres can choose the date, time and location of assessments. The assessments for these qualifications are available as paper-based assessments and through our online assessment platform.

Results

Past the initial awarding period, results are issued 6 working days after the date of the assessment's successful upload to NCFE's online assessment platform or the papers being sent back to NCFE for marking.

When results are delayed due to awarding of new papers the information will be shown on the updates tab of the functional skills page on Qualhub. This information is available in advance for centres.

Feedback

Centres have access to free automated feedback for online assessments that shows the percentage of marks for each subject content area. These can be shared with learners. There are also compact and rich feedback options for paper-based assessments.

Section 2: Subject content and assessment guidance

This section provides details of the structure and content of these qualifications. The Functional Skills subject content is provided by the Department for Education, who stipulate that Awarding Organisations must create Functional Skills qualifications that rigidly adhere to this content.

Referencing for the subject content uses the following coding:

L1: Level 1

L2: Level 2

N: Using numbers and the number system

M: Using common measures, shape and space

H: Handling information and data

Mathematics Level 1 subject content

Level 1: Using numbers and the number system – whole numbers, fractions, decimals and percentages

| Reference | Subject content statement | Assessment weighting (approx.) |
|-----------|---|--------------------------------|
| L1.N1 | Read, write, order and compare large numbers (up to one million) | 50-60% |
| L1.N2 | Recognise and use positive and negative numbers | |
| L1.N3 | Multiply and divide whole numbers and decimals by 10, 100, 1000 | |
| L1.N4 | Use multiplication facts and make connections with division facts | |
| L1.N5 | Use simple formulae expressed in words for one or 2-step operations | |
| L1.N6 | Calculate the squares of one-digit and 2-digit numbers | |
| L1.N7 | Follow the order of precedence of operators | |
| L1.N8 | Read, write, order and compare common fractions and mixed numbers | |
| L1.N9 | Find fractions of whole number quantities or measurements | |
| L1.N10 | Read, write, order and compare decimals up to 3 decimal places | |
| L1.N11 | Add, subtract, multiply and divide decimals up to 2 decimal places | |
| L1.N12 | Approximate by rounding to a whole number or to one or 2 decimal places | |

| | | |
|--|--|--|
| L1.N13 | Read, write, order and compare percentages in whole numbers | |
| L1.N14 | Calculate percentages of quantities, including simple percentage increases and decreases by 5% and multiples thereof | |
| L1.N15 | Estimate answers to calculations using fractions and decimals | |
| L1.N16 | Recognise and calculate equivalences between common fractions, percentages and decimals | |
| L1.N17 | Work with simple ratio and direct proportions | |
| <p>Learners at Level 1 are expected to be able to count in steps of various sizes, including negative numbers; read, write and understand positive whole numbers to one million. They can order and compare whole numbers of any size, and fractions, ratios and decimals and recognise the effect of multiplying and dividing by powers of 10, 100 and 1000. They can identify, compare and extend a range of numerical and spatial patterns, use, understand and calculate with fractions, decimals and percentages and calculate simple interest.</p> | | |

Level 1: Using common measures, shape and space

| Reference | Subject content statement | Assessment weighting (approx.) |
|--|---|--------------------------------|
| L1.M18 | Calculate simple interest in multiples of 5% on amounts of money | 20-30% |
| L1.M19 | Calculate discounts in multiples of 5% on amounts of money | |
| L1.M20 | Convert between units of length, weight, capacity, money and time, in the same system | |
| L1.M21 | Recognise and make use of simple scales on maps and drawings | |
| L1.M22 | Calculate the area and perimeter of simple shapes including those that are made up of a combination of rectangles | |
| L1.M23 | Calculate the volumes of cubes and cuboids | |
| L1.M24 | Draw 2-D shapes and demonstrate an understanding of line symmetry and knowledge of the relative size of angles | |
| L1.M25 | Interpret plans, elevations and nets of simple 3-D shapes | |
| L1.M26 | Use angles when describing position and direction, and measure angles in degrees | |
| <p>Learners at Level 1 are expected to be able to work out simple relationships between common units of measurement to define quantities, also involving mathematical terms for position and direction. They can apply and use</p> | | |

calculations with common measures including money, time, length, weight and capacity. They can visualise, draw and describe 2-D and 3-D shapes and use properties of 2-D shapes in calculations.

Level 1: Handling information and data

| Reference | Subject content statement | Assessment weighting (approx.) |
|---|--|--------------------------------|
| L1.H27 | Represent discrete data in tables, diagrams and charts including pie charts, bar charts and line graphs | 20-30% |
| L1.H28 | Group discrete data and represent grouped data graphically | |
| L1.H29 | Find the mean and range of a set of quantities | |
| L1.H30 | Understand probability on a scale from 0 (impossible) to 1 (certain) and use probabilities to compare the likelihood of events | |
| L1.H31 | Use equally likely outcomes to find the probabilities of simple events and express them as fractions | |
| <p>Learners at Level 1 are expected to be able to select, construct and interpret a range of statistical diagrams in various contexts; select and use methods and forms to present and describe outcomes. They can extract and interpret information from tables, diagrams, charts and graphs; apply simple statistics and recognise features of charts to summarise and compare sets of data; recognise and use the probability scale and interpret probabilities.</p> | | |

Level 1: Solving mathematical problems and decision making

Learners at Level 1 are expected to be able to use the knowledge and skills listed above to recognise and obtain a solution or solutions to a straightforward problem. A straightforward problem is one that requires learners to either work through one step or process or to work through more than one connected step or process.

Individual problems are based on the knowledge and/or skills in the mathematical content areas (number and the number system; common measures, shape and space; information and data). At Level 1 it is expected that the learner will be able to address individual problems, some of which draw upon a combination of any 2 of the mathematical content areas and require learners to make connections between those content areas.

Learners at Level 1 are expected to be able to:

- Read, understand and use mathematical information and mathematical terms used at this level
- Address individual problems as described above

- Use knowledge and understanding to a required level of accuracy
- Analyse and interpret answers in the context of the original problem
- Check the sense, and reasonableness, of answers
- Present results with appropriate explanation and interpretation, demonstrating simple reasoning to support the process, and show consistency with the evidence presented.

The context of individual problems at this level will require some comprehension in order for the learners to be able to independently identify and carry out an appropriate mathematical approach.

Mathematics Level 2 subject content

Level 2: Using numbers and the number system – whole numbers, fractions, decimals, and percentages

| Reference | Subject content statement | Assessment weighting (approx.) |
|---|--|--------------------------------|
| L2.N1 | Read, write, order and compare positive and negative numbers of any size | 40-50% |
| L2.N2 | Carry out calculations with numbers up to one million, including strategies, to check answers including estimation and approximation | |
| L2.N3 | Evaluate expressions and make substitutions in given formulae in words and symbols | |
| L2.N4 | Identify and know the equivalence between fractions, decimals, and percentages | |
| L2.N5 | Work out percentages of amounts and express one amount as a percentage of another | |
| L2.N6 | Calculate percentage change (any size increase and decrease), and original value after percentage change | |
| L2.N7 | Order, add, subtract, and compare amounts or quantities using proper and improper fractions and mixed numbers | |
| L2.N8 | Express one number as a fraction of another | |
| L2.N9 | Order, approximate and compare decimals | |
| L2.N10 | Add, subtract, multiply and divide decimals up to 3 decimal places | |
| L2.N11 | Understand and calculate using ratios, direct proportion and inverse proportion | |
| L2.N12 | Follow the order of precedence of operators, including indices | |
| Learners at Level 2 are expected to be able to use numbers of any size; read, write and make use of positive and negative integers of any size; use, order and compare integers, fractions, decimals, percentages and ratios as well as | | |

recognise the value of a digit in any whole or decimal number. They can use numerical and spatial patterns for a purpose and calculate with, and convert between, numbers written as fractions, decimals, percentages and ratios.

Level 2: Measures, shape and space

| Reference | Subject content statement | Assessment weighting (approx.) |
|--|--|--------------------------------|
| L2.M13 | Calculate amounts of money, compound interest, percentage increases, decreases and discounts, including tax and simple budgeting | 30-40% |
| L2.M14 | Convert between metric and imperial units of length, weight and capacity using a) a conversion factor and b) a conversion graph | |
| L2.M15 | Calculate using compound measures including speed, density and rates of pay | |
| L2.M16 | Calculate perimeters and areas of 2-D shapes including triangles and circles and composite shapes including non-rectangular shapes (formulae given except for triangles and circles) | |
| L2.M17 | Use formulae to find volumes and surface areas of 3-D shapes including cylinders (formulae to be given for 3-D shapes other than cylinders) | |
| L2.M18 | Calculate actual dimensions from scale drawings and create a scale diagram given actual measurements | |
| L2.M19 | Use coordinates in 2-D, positive and negative, to specify the positions of points | |
| L2.M20 | Understand and use common 2-D representations of 3-D objects | |
| L2.M21 | Draw 3-D shapes to include plans and elevations | |
| L2.M22 | Calculate values of angles and/or coordinates with 2-D and 3-D shapes | |
| Learners at Level 2 are expected to be able to handle relationships between measurements of various kinds, use angles and coordinates when involving position and direction, make use of geometric properties in calculations with 2-D and 3-D shapes and understand the relationships between them. | | |

Level 2: Handling information and data

| Reference | Subject content statement | Assessment weighting (approx.) |
|-----------|---------------------------|--------------------------------|
| | | |

| | | |
|--|--|--------|
| L2.H23 | Calculate the median and mode of a set of quantities | 20-30% |
| L2.H24 | Estimate the mean of a grouped frequency distribution from discrete data | |
| L2.H25 | Use the mean, median, mode and range to compare 2 sets of data | |
| L2.H26 | Work out the probability of combined events including the use of diagrams and tables, including 2-way tables | |
| L2.H27 | Express probabilities as fractions, decimals and percentages | |
| L2.H28 | Draw and interpret scatter diagrams and recognise positive and negative correlation | |
| Learners at Level 2 are expected to be able to construct, interpret and evaluate a range of statistical diagrams. They can calculate and interpret probabilities. They can calculate, analyse, compare and interpret appropriate data sets, tables, diagrams and statistical measures such as common averages (mean, median, mode) and spread (range), and use statistics to compare sets of data. They can identify patterns and trends from data as well as recognise simple correlation | | |

Level 2: Solving mathematical problems and decision making

Learners at Level 2 are expected to be able to use the knowledge and skills listed in the subject content tables to recognise and obtain a solution or solutions to a complex problem. A complex problem is one which requires a multistep process, typically requiring planning and working through at least 2 connected steps or processes.

Individual problems are based on a combination of the knowledge and/or skills from the mathematical content areas (number and the number system; measures, shape and space; information and data). At Level 2 it is expected that the learner will be able to address individual problems, some of which draw upon a combination of all 3 mathematical areas and require learners to make connections between those content areas.

Learners at Level 2 are expected to be able to:

- read, understand, and use mathematical information and mathematical terms
- address individual problems as described above
- use knowledge and understanding to a required level of accuracy
- identify suitable operations and calculations to generate results
- analyse and interpret answers in the context of the original problem
- check the sense and reasonableness of answers

- present and explain results clearly and accurately demonstrating reasoning to support the process and show consistency with the evidence presented.

The context of individual problems at this level will require interpretation and analysis in order for the learner to be able to independently identify and carry out an appropriate mathematical process or processes.

For further detail on the learning objectives for each subject content statement, please refer to the Learner Checklists in the Learner Toolkit.