Training Qualifications UK

Qualification Specification

TQUK Functional Skills suite of Qualifications (RQF)

TQUK Functional Skills Qualification in Maths at Level 1 (610/2623/2)

TQUK Functional Skills Qualification in Maths at Level 2 (610/2624/4)

Version 1.7

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Summary of changes

The following table provides a log of the changes that have been made to the document since the previous version.

Version number	Description of change
V1.3	Updates made to the generic information Update made to the assessment results section for clarification
V1.4	Amends made to reflect DfE updates (no material change)
V1.5	Update made to subject content numbering
V1.6	Clarity on materials (calculator) for online assessments
V1.7	Typographical errors corrected on page 8 Revision to the notice period required for paper-based assessments

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Introduction

Welcome to TQUK

Training Qualifications UK (TQUK) is an Awarding Organisation recognised by the Office of Qualifications and Examinations Regulation (Ofqual) in England and CCEA Regulation in Northern Ireland.

TQUK offers qualifications which are regulated by Ofqual and, in some cases, by CCEA Regulation. All regulated TQUK qualifications sit on the Regulated Qualifications Framework (RQF) and are listed on the Register of Regulated Qualifications.

Our qualifications are designed to support and encourage learners to develop their knowledge and skills. This development may result in progression into employment or career development in the workplace. Our qualifications also allow learners to progress onto further qualifications. Please visit our website for news of our new and coming soon developments.

Centre Recognition

To offer a TQUK qualification, a centre must be recognised by TQUK.

The TQUK centre recognition process requires a centre to have in place a number of policies and procedures to protect the learners undertaking a TQUK qualification and the integrity of TQUK's qualifications. These policies and procedures will also support a recognised centre's quality systems and help support the centre to meet the qualification approval criteria.

Recognised centres must seek approval for each qualification they wish to offer.

The approval process requires centres to demonstrate that they have sufficient resources, including suitably qualified and occupationally competent staff to deliver, assess and quality assure the qualification and access to appropriate support in the form of specialist resources. Qualification approval must be confirmed before any assessment of learners takes place.

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Qualification Specifications

Each Functional Skills qualification which TQUK offers is supported by a specification document that includes all the information required by a Centre to deliver a qualification. In this instance, the qualifications covered within this specification document are:

- TQUK Functional Skills Qualification in Maths at Level 1 (610/2623/2)
- TQUK Functional Skills Qualification in Maths at Level 2 (610/2624/4)

Information in this specification document includes the qualification purpose, the assessment strategy and EQA arrangements relevant to the above qualifications. Further supporting documents are also identified in this specification. These include documents to support the administration and operation of externally set, internally delivered assessment.

Details of TQUK's procedures and policies can be found on our website.

Qualification specifications can also be found on our website.

If you have any further questions, please contact TQUK.

Use of TQUK Logo, Name and Qualifications

TQUK is a professional organisation and the use of its name and logo is restricted. TQUK's name may only be used by recognised centres to promote TQUK qualifications. Recognised centres may use the logo for promotional materials such as corporate/business letterheads, pages of the centre's website relating to TQUK qualifications, printed brochures, leaflets, or exhibition stands.

When using TQUK's logo, there must be no changes or amendments made to it, in terms of colour, size, border or shading. The logo must only be used in a way that easily identifies it as TQUK's logo. Any representation of TQUK's logo must be a true representation of the logo.

It is the responsibility of the centre to monitor the use and marketing of TQUK's logos and qualifications on their own materials as well as on those of any re-sellers or third parties they may use. TQUK must be made aware of centre relationships with re-sellers of TQUK qualifications. TQUK must be made aware of any additional websites where the centre intends to use TQUK's name and/or logo. If this information is changed, TQUK should be notified immediately. TQUK is required to monitor centres' websites and materials to ensure that learners are not being misled.

If a centre ceases to be/surrenders recognition as a TQUK centre, it must immediately discontinue the use of TQUK's logo, name, and qualifications from all websites and documents.

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Section 1: About the qualifications

TQUK Functional Skills Qualifications in Maths at Level 1

QAN	GLH	TQT	Sector	Review date
610/2623/2	55	60	14.1	01/06/2023

TQUK Functional Skills Qualifications in Maths at Level 2

QAN	GLH	TQT	Sector	Review date
610/2624/4	55	60	14.1	01/06/2023

Introduction to the qualifications

The TQUK Functional Skills qualifications in maths at Level 1 and Level 2 are qualifications regulated by Ofqual.

Functional Skills qualifications are designed to provide reliable evidence of a learner's achievements against demanding content that is relevant to the workplace. They also provide a foundation for progression into employment or further technical education and develop skills for everyday life.

The TQUK Functional Skills qualifications in maths at Level 1 and Level 2 enable the learner to gain confidence and fluency in, and a positive attitude towards, mathematics. Learners will convey their confidence in using mathematics when they can demonstrate a sound grasp of mathematical knowledge and skills and apply it to solving mathematical problems.

Purpose of each qualification

The purpose of all Functional Skills qualifications in maths for Level 1 and Level 2 is to provide a qualification for work, study and life.

The achievement of each qualification demonstrates a sound grasp of mathematical skills at the appropriate level and the ability to apply mathematical thinking effectively to solve problems successfully in the workplace and in other real-life situations.

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Learning aims and outcomes at Levels 1 and 2

Functional Skills maths qualifications at these levels should:

- indicate that learners can demonstrate, through appropriate reasoning and decision-making, their ability:
  - in mathematical skills
  - to apply these to solve realistic problems of increasing complexity
- introduce learners to new areas of life and work so that they are exposed to concepts and problems that, while not of immediate concern, may be of value later
- enable learners to develop an appreciation of the role played by maths at work and in life generally.

Subject content of each qualification

The Department for Education (DfE) have specified the subject content which should underpin all Functional Skills qualifications, including the learning aims and outcomes that learners must achieve. For a full understanding of the subject content for the TQUK Functional Skills qualifications in maths at Level 1 and Level 2, visit the appendix to this document. Alternatively, the full document is available on the government website.

Entry requirements for each qualification

There are no set age requirements for taking Functional Skills assessments but do consider learner maturity and their readiness for assessment when entering them for these tests. Formative assessments should guide your choice regarding the appropriate level at which to enrol learners.

Progression

Learners who achieve the TQUK Functional Skills Qualification in Maths at Level 1 could progress to:

- GCSE Mathematics
- further study for general or vocational qualifications at a suitable level
- further study at Level 2 (for example, the TQUK Functional Skills Qualification in Maths at Level 2.

Learners who achieve the TQUK Functional Skills Qualification in Maths at Level 2 could progress to:

- GCSE Mathematics
- further study for general or vocational qualifications at a suitable level.

Successful learners may be able to apply for or supplement various job roles upon completion of either qualification.

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Structure

The TQUK Functional Skills qualifications in maths at Level 1 and Level 2 do not follow the typical qualification structure of other regulated qualifications. There are no regulated units in these qualifications. In order to pass each qualification, Learners will need to meet the requirements outlined in the assessment strategy before the qualification certificate can be awarded. Assessment components, weighting and the wider assessment process are outlined in 'Section 2: Assessment'.

Guided Learning Hours (GLH)

These hours are made up of all contact time, guidance or supervision of a Learner by a lecturer, supervisor, tutor, trainer or other appropriate provider of education or training.

The GLH for **each** qualification is **55 hours**. This is set by the regulator, Ofqual.

Directed study requirements

Learners are expected to study and reinforce aspects of the learning programme away from the classroom. For both qualifications, this additional time is expected to be approximately **five hours** over the cycle of the training and assessment programme. The majority of the directed study hours would be dedicated to preparing for the single-component assessment.

Total Qualification Time (TQT)

Total Qualification Time is comprised of GLH and an estimate of the number of hours a Learner is likely to spend in preparation, study or any other learning including assessment which takes place as directed by, but not under the supervision of, a Lecturer, Supervisor or Tutor.

The TQT for each qualification is **60 hours**.

Funding information

Qualification eligibility can be found on the Education and Skills Funding Agency (ESFA) funding hub here. 16-19-year-old Learners on study programmes, all-age apprentices and 19-year-olds and above who have not previously attained a GCSE Grade A* to C or Grade 4 in English and Mathematics can be fully funded to take TQUK Functional Skills qualifications. Be sure to check the funding hub regularly for current and accurate information on funding eligibility.

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How to deliver Functional Skills qualifications

To offer any TQUK qualification, each Centre must be recognised by TQUK and must meet the qualification approval criteria.

Qualification approval must be confirmed prior to any assessment of Learners taking place.

The TQUK Centre recognition process requires a Centre to have in place a number of policies and procedures to protect both the Learners undertaking a TQUK qualification and the integrity of TQUK's qualifications. The policies and procedures will also support a Centre's quality systems.

Centres must seek approval for each qualification they wish to offer. The approval process requires Centres to demonstrate that they have the resources, including staff, to deliver and quality assure the qualification.

Qualification documents

The TQUK Functional Skills qualifications in maths at Level 1 and Level 2 are supported by a number of documents, including a Functional Skills FAQs and mock assessments. Each of these documents can be found on the Functional Skills section of the TQUK website.

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Section 2: Assessment

Assessment Strategy

The high-level assessment strategy for both qualifications is included below. Each aspect of the assessment strategy table is explored in detail in this document and further reinforced in the Functional Skills FAQs document. Centres should read both documents to develop a full end-to-end understanding of assessment delivery arrangements.

TQUK Functional Skills Qualifications in Maths at Level 1

Component	Type	Grading	Marking	Weighting	Duration
Section A: Non-calculator	Written assessment	Pass/Fail at certificate level	Numerically marked by the AO	25%	30 mins
Section B: Calculator				75%	90 mins

TQUK Functional Skills Qualifications in Maths at Level 2

Component	Type	Grading	Marking	Weighting	Duration
Section A: Non-calculator	Written assessment	Pass/Fail at certificate level	Numerically marked by the AO	25%	30 mins
Section B: Calculator				75%	90 mins

Both sections of the assessment for both Level 1 and Level 2 must be completed in **one** continuous sitting.

Assessment components

Both TQUK Functional Skills qualifications in maths at Level 1 and Level 2 are assessed via one single-component assessment, divided into two sections, as outlined above.

The Learner's overall mark is determined through the combination of **all** marks across Section A and Section B. A Learner will achieve the qualification if this combined mark they achieve is equal to or above the pass mark for the assessment paper provided. There is no pass mark per section.

If the Learner fails to achieve a mark which is equal to or above the pass mark for the assessment paper, the Learner will be issued with a Fail grade.

All assessment is set and marked by the Awarding Organisation.

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Assessment Coverage and Weighting

In designing and setting the assessment component for the TQUK Functional Skills qualifications in maths at Level 1 and Level 2, TQUK are required to commit to pre-standardised arrangements in terms of assessment coverage and weighting. Essentially, this involves identifying how many questions, items or marks are allocated to a particular category. Each mark scheme document offered by TQUK will clearly identify these distributions, which are included below for your convenience.

Weighting of calculator and non-calculator tasks

In designing and setting the assessment for a Functional Skills qualification in maths, TQUK will take steps to ensure that of the total marks available across the single-component:

- 25% are allocated to questions or tasks which must be completed by Learners without the use of, or access to, a calculator. These questions will always be found in Section A: Non-calculator
- 75% are allocated to questions or tasks for which Learners are permitted to use a calculator. These questions will always be restricted to Section B: Calculator.

Weighting of the content areas

Functional Skills qualifications in maths at Level 1 and Level 2 need to provide assessment of Learners' underpinning skills – defined as 'the ability to do maths when not as part of a problem' – as well as their ability to apply mathematical thinking to solve problems.

In designing and setting the single-component assessment for a Functional Skills Qualification in maths, TQUK have standardised processes in place to make certain that we take reasonable steps to ensure that of the total marks available in the assessment:

- 25% are allocated to questions or tasks which assess underpinning skills
- 75% are allocated to questions or tasks which assess problem solving.

Where it is not possible to achieve these weightings, TQUK will ensure that the weighting of the assessment of underpinning skills and problem solving is within **+/- 2%** of the relevant weighting specified above.

Assessment Timings

TQUK have allocated timings to both sections of the single assessment component. This can be found in the table on page 11 of this specification document.

Assessment booking

Learners must be registered for the qualification prior to being scheduled for a Functional Skills assessment. All assessment attempts can be scheduled in the Verve system after Learner registration. For online assessment, the Centre can set their own dates/time for assessments provided this is suitable for the Learner(s).

For paper-based assessments we require ten working days' notice.

Further information can be found in the Functional Skills FAQs.

Assessment delivery

For Functional Skills qualifications in maths at Level 1 and Level 2, Centres are required to read and abide by the assessment delivery conditions identified in the Functional Skills FAQs. This document outlines our commitment to Centres in terms of the design, development and marking of assessment, as well as the Centre's obligations in the appropriate administration and operation of the required assessment strategy.

The conditions identified in the Functional Skills FAQs outline all requirements with regard to both face-to-face and remote assessment delivery.

Assessment materials

For Section A of the single-component assessment, Learners are **not** able to use a calculator.

For Section B for a **paper-based assessment** of the single-component assessment, Learners can use a physical calculator.

For Section B in an **online assessment** of the single-component assessment, Learners can only use the online calculator tool provided and must not bring a physical calculator to the assessment.

Learners will be required to bring typical mathematical equipment. For paper-based assessments, Learners must bring:

- Pen and pencil
- Eraser
- Ruler (30cm)
- Protractor
- Compass
- Non-scientific Calculator (Section B only)

Learners will not need any other equipment, unless requested and approved through a reasonable adjustment.

We recommend Learners bring the above for **every** assessment, however, we cannot guarantee all will be required on each occasion. For example, each assessment paper may not always require the use of a protractor.

To avoid any confusion and unnecessary burden on the Learner the requirements for the calculator are outlined below

Learners are allowed to bring only **a basic, non-scientific calculator** into paper-based assessments. In the interest of comparability, the physical calculator **must** match the functionality of the Verve assessment system's calculator, as detailed below:

Calculators must be:

- of a size suitable for use on the desk
- either battery or solar powered
- free of lids, cases and covers which have printed instructions or formulae.

Calculators must not be designed or adapted to offer any of these facilities:

- language translators
- symbolic algebra manipulation
- symbolic differentiation or integration
- communication with other machines or the internet
- be borrowed from another candidate during an assessment for any reason
- have retrievable information stored in them. This includes:
    - databanks
    - dictionaries
    - mathematical formulae
    - text.

The online assessment platform deployed by TQUK is only available to the Learner during Section B of the assessment.

Centres should make learners aware of calculator requirements for paper-based assessments as early in the teaching programme as possible and ensure all learners are aware of the following:

- that they are responsible for providing the calculator for a paper-based assessment (if this is to be the case)
- that they are responsible for the calculator's power supply
- that they are responsible for ensuring the calculator is working as it should
- that no data or information can be stored in the calculator.

When delivering paper-based assessment, access to calculators must be monitored by the nominated invigilator or team of invigilators.

Assessment invigilation

As identified, assessment may take place remotely using TQUK's online assessment platform. The Centre must use all supporting resources offered by TQUK to provide full details about the requirements for and expectations of remote invigilation to the Learner to ensure they are appropriately prepared. To further support your Learners, we recommend you and your learners read and review the following exam system guidance documents:

- Secure Browser
- Accessible Browser
- Invigilator Guidance

TQUK have compiled the FAQs document to make it as easy as possible for you and your Learners to understand how to use this platform and to minimise unnecessary burden during the assessment platform.

Learners are encouraged to contact TQUK, both at the beginning and at the end of the examination if they have experienced difficulties or require assistance. Learners can email and phone TQUK, dealing directly with the Assessment Team when issues are experienced during office hours.

The conditions for the appropriate invigilation of face-to-face and remote assessment are identified in the Functional Skills FAQs.

When delivering paper-based assessment, access to calculators must be monitored by the nominated invigilator or team of invigilators.

Invigilation ratios

TQUK does not specify set numbers of learners per invigilator for remote invigilation. Centres should follow the guidance of Joint Council for Qualifications (JCQ). Guidance can be found on the JCQ webpage ICE - Instruction for Conducting Examinations, in the document titled '*Instructions for Conducting Functional Skills assessments (English and Mathematics)*' and specifically referenced in '*Section 24 General environment/layout of the assessment room*'.

Assessment marking

Evidence generated by a Learner in an assessment at levels 1 and 2 will be marked by the Awarding Organisation or a person connected to the Awarding Organisation.

Assessment attempts

The price charged per Learner can be found on the TQUK website. This will also identify the number of assessment attempts available to the Learner based on the option selected.

There is an additional cost to using TQUK's online remote invigilation platform, Saras. This is also identified on the website.

Should a Learner fail to achieve a 'Pass' within their initial registration period, the Learner will be able to re-register to for further assessment attempts on any previously failed external assessment components.

Learners are not limited in the number of times that they may be re-assessed on a single external assessment component. However, where a Learner continues to fail an assessment attempt, the Centre should ensure the Learner is being entered at the appropriate level.

There is no minimum time between assessment attempts, apart from the notice period specified in the booking arrangements for the particular assessment method (i.e. 5 working days' notice for the booking of online assessment attempts).

Further information is provided in the Functional Skills FAQs.

Assessment standardisation

Centres are required to contribute to national standardisation as requested by the Awarding Organisation. Internal standardisation involves ensuring that, where there is more than one Tutor delivering a particular Functional Skills qualification, standardisation of delivery takes place. This will be reviewed by the External Quality Assurer.

Assessment results

Results will be available to Centres via the TQUK Verve Management suite (Reg and Cert).

We will aim to release results for both paper-based and online assessment within 6 working days. For paper-based assessments this is 6 working days from receiving exam papers, accounting for delivery. For online assessments, learners will receive an email notification once results are released.

To ensure the integrity and consistency of our assessments, we regularly update our bank of live papers. Any papers which are retired will be used for mock assessments. When new papers are launched, we conduct a standard setting and validation process called 'Awarding'. As we use actual learner responses and data to establish a pass threshold, we have to ensure we have sufficient

responses and data to do this. Therefore, we temporarily extend our standard six-day result turnaround during the Awarding process.

To assist you in organising assessments and planning results releases, we have provided a schedule for introducing new papers throughout the year. Every result from a newly introduced paper will have a predetermined release date, offering clarity on when to expect learner results. If a result isn't provided within six working days, it will be delivered by the designated date.

Further details and timeframes are available in the Functional Skills Key Dates document available on our website.

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Section 3: Course Delivery

Pre-Course information

All Learners should be given appropriate pre-course information regarding any TQUK qualifications. The information should explain the nature of the qualification, the fee, the form of the assessment and any entry requirements or resources needed to undertake the qualification.

Initial assessment

Centres should ensure that any Learner registered on a TQUK qualification undertakes some form of initial assessment. The initial assessment should be used to inform a Teacher/Tutor about the Learner's current level of knowledge and/or skills and any additional specific support requirement(s) the Learner may need.

Initial assessment can be undertaken by a Teacher/Tutor in any form suitable for the qualification to be undertaken by the Learner(s). It is the Centre's responsibility to create and make available forms of initial assessment that are valid, applicable and relevant to TQUK qualifications.

Identification/authentication

It is a Centre's responsibility to confirm the identity of a Learner as part of its registration process.

The following are examples which would be considered appropriate proof of a Learner's identity:

- a signed UK photo card driving licence
- a valid passport (any nationality)
- other photographic ID card, e.g. employee ID card (must be current Employer), student ID card, travel card
- UK biometric residence permit

This identification should also be used to authenticate the identity of the Learner during assessment.

Further information is provided in the Functional Skills FAQs.

Centre Resources

The Centre should have in place a **delivery model** which is clearly aligned to the Subject Content, the Guided Learning Hours and Total Qualification Time for the qualification(s) being delivered, adapting where necessary to meet the needs of either a Learner or cohort of Learners.

All Centres are required to have in place a safe and appropriate assessment environment for the delivery of both online and paper-based assessments.

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Learner Registration

Once approved to offer a qualification, the Centre must register Learners before any assessment can take place. The registration of Learners for assessment can take place at any point after registering the Learner to the qualification.

Centres must follow TQUK's procedures for registering Learners. For short courses, TQUK offer the option of registering for a course and booking a number of places. Learners are then added once the course has taken place, thus acknowledging situations where substitutions are made at short notice to meet business needs.

Tutor, Assessor, and Internal Quality Assurer Requirements

The Centre is required to **supply and maintain** a qualification workforce of an appropriate size and competence to effectively deliver each Functional Skills qualification.

Tutors

Tutors could hold a recognised teaching qualification, be occupationally competent in their chosen qualification subject area or have achieved the qualification at Level 2.

Assessors

TQUK is responsible for the marking of all aspects of the single-component assessment. The Centre must ensure competent staff are in place to support the assessment process. This includes suitable Administrators and Invigilators.

Internal Quality Assurers

Internal Quality Assurers could hold a recognised internal quality assurance/verification qualification or be working towards one. The following are suitable examples:

- D34 qualification
- V1 qualification
- Internal Verifier Award
- Internal Verification of Credit Based Learning: Continuing Professional Development for Practitioners Award
- Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice (QCF)
- Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice (QCF).

Assessment Invigilators

The Invigilator is responsible for conducting an assessment session under formal assessment conditions.

No tutor of a Functional Skills qualification can be involved in the administration of the assessment materials for level 1 and 2 exams, regardless of the level they teach. Administration includes invigilation, but also initial receipt, secure storage, movement, or preparation of confidential material for external assessments before, during, or after an external assessment.

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External Quality Assurance

External Quality Assurance will be undertaken by TQUK to ensure that Centres are satisfying requirements associated with their TQUK recognised Centre status and formal written agreement.

Useful Websites

Office of Qualifications and Examinations Regulation

Register of Regulated Qualifications

For further details regarding approval and funding eligibility please refer to the following websites:

Education & Skills Funding Agency for public funding information for 14+ Learners in England

Learning Aim Reference Service (LARS)

Appendix 1: TQUK Functional Skills in Mathematics at Level 1 Subject Content

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

Learners at Level 1 are expected to be able to:

- count in steps of various sizes, including in negative numbers
- read, write and understand positive whole numbers to one million
- order and compare:
  - whole numbers of any size
  - fractions
  - ratios
  - decimals
- recognise the effect of multiplying and dividing by powers of:
  - 10
  - 100
  - 1,000
- identify, compare and extend a range of:
  - numerical patterns
  - spatial patterns
- use, understand and calculate with:
  - fractions
  - decimals
  - percentages
- calculate simple interest

They are specifically expected to be able to:	
1	Read, write, order and compare large numbers up to one million
2	Recognise and use: • positive numbers • negative numbers
3	Multiply and divide whole numbers and decimals by: • 10 • 100 • 1,000
4	Use multiplication facts and make connections with division facts
5	Use simple formulae expressed in words for: • one-step operations • 2-step operations

6	Calculate the squares of: • one-digit numbers • 2-digit numbers
7	Follow the order of precedence of operators
8	Read, write, order and compare: • common fractions • mixed numbers
9	Find fractions of whole-number: • quantities • measurements
10	Read, write, order and compare decimals up to 3 decimal places
11	Add, subtract, multiply and divide decimals up to 2 decimal places
12	Approximate by rounding to: • a whole number • one decimal place • 2 decimal places
13	Read, write, order and compare percentages in whole numbers
14	• Calculate percentages of quantities, including: ○ simple percentage increases by 5% ○ simple percentage decreases by 5% ○ multiples thereof
15	• Estimate answers to calculations using: ○ fractions ○ decimals
16	• Recognise and calculate equivalences between: ○ common fractions ○ percentages ○ decimals
17	• Work with: ○ simple ratio ○ direct proportions

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Using common measures, shape and space

Learners at Level 1 are expected to be able to:

- work out simple relationships between common units of measurement to define quantities
- use mathematical terms for position and direction
- apply and use calculations with common measures, including:
  - money
  - time
  - length
  - weight
  - capacity
- visualise, draw and describe 2-D and 3-D shapes
- use the properties of 2-D shapes in calculations

They are specifically expected to be able to:	
18	Calculate simple interest in multiples of 5% on amounts of money
19	Calculate discounts in multiples of 5% on amounts of money
20	Convert in the same system between units of: • length • weight • capacity • money • time
21	Recognise and make use of simple scales on: • maps • drawings
22	Calculate the area and perimeter of simple shapes, including those that are made up of a combination of rectangles
23	Calculate the volumes of: • cubes • cuboids
24	Draw 2-D shapes and demonstrate an understanding of line symmetry and knowledge of the relative size of angles
25	Interpret plans, elevations and nets of simple 3-D shapes
26	Measure angles in degrees and use angles when describing: • position • direction

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Handle information and data

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
- extract and interpret information from:
  - tables
  - diagrams
  - charts
  - graphs
- apply simple statistics
- recognise features of charts to summarise and compare sets of data
- recognise and use the probability scale and interpret probabilities

They are specifically expected to be able to:	
27	Represent discrete data in tables, diagrams and charts, including: • pie charts • bar charts • line graphs
28	Group discrete data and represent grouped data graphically
29	Find the mean and range of a set of quantities
30	Understand probability on a scale from 0 (impossible) to 1 (certain) and use probabilities to compare the likelihood of events
31	Use equally likely outcomes to find the probabilities of simple events and express them as fractions

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Solving mathematical problems and decision-making

Learners at Level 1 are expected to be able to use the knowledge and skills set out in the subject content section to:

- recognise a straightforward problem
- obtain a solution or solutions to a straightforward problem

A straightforward problem is one that requires learners to work through either:

- one step or process
- more than one connected step or process

Individual problems are based on the knowledge and/or skills from 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 terms appropriate to Level 1 • Address individual problems as described • Use knowledge and understanding to a required level of accuracy • Check the sense and reasonableness of answers • Analyse and interpret results in the context of the original problem • 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 learner to be able to independently identify and carry out an appropriate mathematical approach.

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Appendix 2: TQUK Functional Skills in Mathematics at Level 2 Subject Content

Using numbers and the number system- whole numbers, fractions, decimals, and percentages

Learners at Level 2 are expected to be able to:

- use numbers of any size
- read, write and make use of:
  - positive integers of any size
  - negative integers of any size
- use, order and compare:
  - integers
  - fractions
  - decimals
  - percentages
  - ratios
- recognise the value of a digit in any:
  - whole number
  - decimal number
- use numerical and spatial patterns for a purpose and calculate with, and convert between, numbers written as fractions, decimals, percentages and ratios

They are specifically expected to be able to:	
1	Read, write, order and compare: • positive numbers of any size • negative numbers of any size
2	Carry out calculations with numbers up to one million, using strategies to check answers, including: • estimation • approximation
3	Evaluate expressions and make substitutions in given formulae in: • words • symbols
4	Identify and know the equivalence between: • fractions • decimals • percentages
5	Work out percentages of amounts and express one amount as a percentage of another
6	Calculate: • percentage change (any size of increase and decrease) • original value after percentage change

7	Order, add, subtract and compare amounts or quantities using: • proper fractions • improper fractions • mixed numbers
8	Express one number as a fraction of another
9	Order, approximate and compare decimals
10	Add, subtract, multiply and divide decimals to 3 decimal places
11	Understand and calculate using: • ratios • direct proportion • inverse proportion
12	Follow the order of precedence of operators, including indices

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Using measures, shape and space

Learners at Level 2 are expected to be able to:

- handle relationships between measurements of various kinds
- use angles and co-ordinates when describing position and direction
- make use of geometric properties in calculations with 2-D and 3-D shapes, and understand the relationships between them

They are specifically expected to be able to:	
13	Calculate amounts of: • money • compound interest • percentage increases • percentage decreases • discounts, including tax and simple budgeting
14	Convert, using a conversion factor and conversion graph, between metric and imperial units of: • length • weight • capacity
15	Calculate using compound measures, including: • speed • density • rates of pay
16	Calculate the perimeter and area of 2-D shapes, including: • triangles • circles • composite shapes, including non-rectangular shapes (formulae given, except for triangles and circles)
17	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)
18	Calculate actual dimensions from scale drawings and create a scale diagram, given actual measurements
19	Use co-ordinates in 2-D, positive and negative, to specify the positions of points
20	Understand and use common 2-D representations of 3-D objects
21	Draw 3-D shapes, including plans and elevations
22	Calculate values of angles and/or co-ordinates with 2-D and 3-D shapes

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Handling information and data

Learners at Level 2 are expected to be able to:

- construct, interpret and evaluate a range of statistical diagrams
- calculate and interpret probabilities
- calculate, analyse, compare and interpret appropriate:
  - data sets
  - tables
  - diagrams
  - statistical measures such as common averages (mean, median, mode) and spread (range)
- use statistics to compare 2 sets of data
- identify patterns and trends from data
- recognise simple correlation

They are specifically expected to:	
23	Calculate the median and mode of a set of quantities
24	Estimate the mean of a grouped frequency distribution from discrete data
25	Use the mean, median, mode and range to compare 2 sets of data
26	Work out the probability of combined events, using diagrams and tables, including 2-way tables
27	Express probabilities as: • fractions • decimals • percentages
28	Draw and interpret scatter diagrams, and recognise: • positive correlation • negative correlation

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Solving mathematical problems and decision-making

Learners at Level 2 are expected to be able to use the knowledge and skills set out in the subject content section to:

- recognise a complex mathematical problem
- obtain a solution or solutions

A complex mathematical problem is one that requires:

- a multi-step process
- planning and working through at least 2 connected steps or processes

Individual problems are based on a combination of the knowledge and skills from the mathematical content areas:

- number and the number system
- common 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 on a combination of all 3 content areas and require learners to make connections between them.

Learners at Level 2 are expected to be able to:
• Read, understand and use mathematical information and terms • Address individual problems as described • Use knowledge and understanding to a required level of accuracy • Identify suitable operations and calculations to generate results • Analyse and interpret results 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.