



# Qualification specification

**NCFE Level 1 Certificate in Maths**  
**QN: 601/1090/9**

### Qualification summary

The table below provides information about the NCFE Level 1 Certificate in Maths (601/1090/9), which consists of 9 of the 10 units that comprise the level 1 maths suite. For information on the themed awards and single-unit awards, please see page 5.

<b>Qualification title</b>	NCFE Level 1 Certificate in Maths		
<b>Ofqual qualification number (QN)</b>	601/1090/9	<b>Aim reference</b>	60110909
<b>Guided learning hours (GLH)</b>	170	<b>Total qualification time (TQT)</b>	170
<b>Credit value</b>	17		
<b>Minimum age</b>	Pre-16		
<b>Qualification purpose</b>	This qualification has been designed to provide learners with knowledge and understanding of the key areas of maths: using number, measures, shapes and space, and handling data.		
<b>Grading</b>	Achieved/not yet achieved		
<b>Assessment method</b>	Internally assessed and externally quality assured portfolio of evidence.		
<b>Work/industry placement experience</b>	This is a knowledge-only qualification. Work/industry placement experience is not required.		

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**Summary of changes**

<b>Version</b>	<b>Publication date</b>	<b>Summary of amendments</b>
v3.0	September 2021	<p>Repeated statements have been removed from the delivery guidance and collated in Section 2: unit content and assessment guidance.</p> <p>Terminology has been updated throughout the qualification specification to include 'candidate' to 'learner' and 'verifier' to 'quality assurer'.</p>
v3.1	October 2021	<p>The qualification specification has been updated to remove references to the support handbook, which is not relevant for this qualification.</p>

## Section 1: introduction

### Aims and objectives

These qualifications aim to:

- provide learners with the underpinning knowledge and skills to support development of their skills using numbers, measures, shape and space and handling data
- offer breadth and depth of study, incorporating a key core of knowledge
- support progression into GCSE or level 2 Functional Skills qualifications in maths

The objectives of these qualifications are to help learners to:

- use whole numbers
- use measurement, shape and space
- handle data
- work with whole numbers
- work with fractions
- work with decimals and percentages
- work with money
- work with statistics
- work with probability
- work with basic algebra and geometry
- work with mathematical skills
- working with measurement
- working with 2D shapes and space

### Entry guidance

The NCFE level 1 maths qualifications are designed for adult learners who have not yet achieved a GCSE or level 2 Functional Skills in maths and who wish to take their first qualification in the subject. The qualifications will support learners with an identified skills gap in maths and can be used to support progression into GCSE or level 2 Functional Skills in maths.

However, the NCFE level 1 maths qualifications may also be suitable for those learners still in education, such as 16 to 18 year olds, who have not yet achieved GCSE or level 2 Functional Skills in maths. The qualifications could also be used by pre-16 learners who are not following a traditional GCSE route in education.

These qualifications can also support learners undertaking a vocational programme to develop their skills in maths. The qualifications could be taken by learners following a GCSE programme of learning who are not yet ready to take GCSE level studies in maths.

Entry is at the discretion of the centre.

There are no specific recommended prior learning requirements for these qualifications. However, learners may find it helpful if they have already achieved an entry level 3 qualification.

These qualifications are suitable for learners aged pre-16 and above.

Centres are responsible for ensuring that all learners are capable of achieving the learning outcomes and complying with the relevant literacy, numeracy and health and safety requirements.

Learners registered on these qualifications should not undertake another qualification at the same level, or with the same/a similar title, as duplication of learning may affect funding eligibility.

**Important: centres are encouraged to utilise diagnostic skills assessments to understand the level of their learners to ensure they are registered on the most appropriate qualification level within the maths suite.**

## Achieving these qualifications

Please refer to the unit summaries in section 2 for further information.

To achieve these qualifications, learners must successfully demonstrate their achievement of all learning outcomes of the units as detailed in this qualification specification.

The level 1 maths qualification suite offers a number of single unit awards, themed awards and a certificate based on the following units:

- Working with whole numbers (Y/505/2740)
- Working with fractions (D/505/2741)
- Working with decimals and percentages (H/505/2742)
- Working with measurement (K/505/2743)
- Working with 2D shapes and space (M/505/2744)
- Working with money (T/505/2745)
- Working with statistics (A/505/2746)
- Working with probability (F/505/2747)
- Working with basic algebra and geometry (J/505/2748)
- Working with mathematical skills (L/505/2749)

## Certificate

To be awarded the NCFE Level 1 Certificate in Maths (601/1090/9), learners are required to successfully complete 8 mandatory units and 1 optional unit.

## Mandatory units

- Working with whole numbers (Y/505/2740)
- Working with fractions (D/505/2741)
- Working with decimals and percentages (H/505/2742)
- Working with measurement (K/505/2743)
- Working with 2D shapes and space (M/505/2744)
- Working with money (T/505/2745)
- Working with statistics (A/505/2746)
- Working with probability (F/505/2747)

## Optional units

- Working with basic algebra and geometry (J/505/2748)
- Working with mathematical skills (L/505/2749)

To achieve the NCFE Level 1 Certificate in Maths (601/1090/9), learners must successfully demonstrate their achievement of all learning outcomes and assessment criteria of the units as detailed in this qualification specification. Grades are not awarded.

## Themed awards

### **NCFE Level 1 Award in Maths: Using Number**

Qualification number (QN): 601/1161/6

Aim reference: 60111616

Guided learning hours (GLH): 70

Total qualification time (TQT): 70

Credit value: 7

3 mandatory units:

- Working with whole numbers (Y/505/2740)
- Working with fractions (D/505/2741)
- Working with decimals and percentages (H/505/2742)

### **NCFE Level 1 Award in Maths: Using Measurement, Shape and Space**

Qualification number (QN): 601/1162/8

Aim reference: 60111628

Guided learning hours (GLH): 40

Total qualification time (TQT): 40

Credit value: 4

3 mandatory units:

- Working with measurement (K/505/2743)
- Working with 2D shapes and space (M/505/2744)
- Working with money (T/505/2745)

### **NCFE Level 1 Award in Maths: Handling Data**

Qualification number (QN): 601/1163/X

Aim reference: 6011163X

Guided learning hours (GLH): 40

Total qualification time (TQT): 40

Credit value: 4

2 mandatory units:

- Working with statistics (A/505/2746)
- Working with probability (F/505/2747)

## Single unit awards

To be awarded the NCFE level 1 unit award in maths, learners are required to successfully complete one of the following units. Grades are not awarded.

### **NCFE Level 1 Award in Maths: Working with Whole Numbers**

Qualification number (QN): 601/1164/1

Aim reference: 60111641

Guided learning hours (GLH): 30

Total qualification time (TQT): 30

Credit value: 3

1 mandatory unit:

- Working with whole numbers (Y/505/2740)



**NCFE Level 1 Award in Maths: Working with Fractions**

Qualification number (QN): 601/1165/3

Aim reference: 60111653

Guided learning hours (GLH): 20

Total qualification time (TQT): 20

Credit value: 2

1 mandatory unit:

- Working with fractions (D/505/2741)

**NCFE Level 1 Award in Maths: Working with Decimals and Percentages**

Qualification number (QN): 601/1166/5

Aim reference: 60111665

Guided learning hours (GLH): 20

Total qualification time (TQT): 20

Credit value: 2

1 mandatory unit:

- Working in decimals and percentages (H/505/2742)

**NCFE Level 1 Award in Maths: Working with Measurement**

Qualification number (QN): 601/1167/7

Aim reference: 60111677

Guided learning hours (GLH): 20

Total qualification time (TQT): 20

Credit value: 2

1 mandatory unit:

- Working with measurement (K/505/2743)

**NCFE Level 1 Award in Maths: Working with 2D Shapes and Space**

Qualification number (QN): 601/1168/9

Aim reference: 60111689

Guided learning hours (GLH): 10

Total qualification time (TQT): 10

Credit value: 1

1 mandatory unit:

- Working with 2D shapes and space (M/505/2744)

**NCFE Level 1 Award in Maths: Working with Money**

Qualification number (QN): 601/1169/0

Aim reference: 60111690

Guided learning hours (GLH): 10

Total qualification time (TQT): 10

Credit value: 1

1 mandatory unit:

- Working with money (T/505/2745)

**NCFE Level 1 Award in Maths: Working with Statistics**

Qualification number (QN): 601/1170/7

Aim reference: 60111707

Guided learning hours (GLH): 20

Total qualification time (TQT): 20

Credit value: 2

1 mandatory unit:

- Working with statistics (A/505/2746)

**NCFE Level 1 Award in Maths: Working with Probability**

Qualification number (QN): 601/1175/6

Aim reference: 60111756

Guided learning hours (GLH): 20

Total qualification time (TQT): 20

Credit value: 2

1 mandatory unit:

- Working with probability (F/505/2747)

**NCFE Level 1 Award in Maths: Working with Basic Algebra and Geometry**

Qualification number (QN): 601/1177/X

Aim reference: 6011177X

Guided learning hours (GLH): 20

Total qualification time (TQT): 20

Credit value: 2

1 mandatory unit:

- Working with basic algebra and geometry (J/505/2748)

**NCFE Level 1 Award in Maths: Working with Mathematical Skills**

Qualification number (QN): 601/1178/1

Aim reference: 60111781

Guided learning hours (GLH): 20

Total qualification time (TQT): 20

Credit value: 2

1 mandatory unit:

- Working with mathematical skills (L/505/2749)

To achieve these qualifications, learners must successfully demonstrate their achievement of all learning outcomes of the unit(s) as detailed in this qualification specification.

## Progression

Learners who achieve this qualification could progress to the following:

- further education:
  - level 2 certificate in maths
  - level 2 awards in maths
  - level 2 Functional Skills qualifications in maths
  - GCSE maths

These qualifications may also be useful to those studying qualifications in the following sector(s):

- preparation for life and work
- arts, media and publishing
- leisure, travel and tourism
- health, public services and care
- business and administration
- information and communication technology (ICT)

Learners can progress from an award to a certificate, but centres must carefully consider which qualification they want to register the learner onto, as the registration fee will be applied for both qualifications.

## Staffing requirements

Centres must provide sufficient numbers of suitably experienced assessors and internal quality assurers to ensure that qualifications are delivered effectively. NCFE cannot be held responsible for any complications that arise in the delivery or assessment process as a result of internal recruitment decisions. Staff recruitment should be made at the discretion of centres, and centres should be aware that it is their responsibility to ensure that all staff involved in the delivery and assessment of NCFE qualifications are suitably qualified.

## Resource requirements

There are no mandatory resource requirements for these qualifications, but centres must ensure learners have access to suitable resources to enable them to cover all the appropriate learning outcomes.

## Real work environment (RWE) requirement/recommendation

These are knowledge-only qualifications. Experience in the real work environment is not required.

## Work/industry placement experience

These are knowledge-only qualifications. Work/industry placement experience is not required.

## How the qualifications are assessed

Assessment is the process of measuring a learner's skill, knowledge and understanding against the standards set in a qualification.

These qualifications are internally assessed and externally quality assured.

The assessment consists of one component:

- an internally assessed portfolio of evidence which is assessed by centre staff and externally quality assured by NCFE (IQA must still be completed by the centre as per usual)

The main pieces of evidence for the portfolio could include:

- assessor observation – completed observational checklists and related action plans
- witness testimony
- learner's proof of work
- worksheets
- assignments/projects/reports
- record of oral and written questioning
- learner and peer reports
- recognition of prior learning (RPL)

Assessment guidance is provided for each unit. Assessors can use other methods of assessment as long as they are valid and reliable and maintain the integrity of the assessment and of the standards required of these qualifications. Acceptable methods of assessment could be drawn from the list above.

Assessors must be satisfied that learners have achieved all learning outcomes and assessment criteria related to the unit being assessed prior to deciding if learners have been successful. Assessors are also responsible for supporting learners through the assessment process.

## Internal assessment

We have created some sample tasks for the internally assessed units, which can be found on our website. These tasks are not mandatory. You can contextualise these tasks to suit the needs of your learners to help them build up their portfolio of evidence. The tasks have been designed to cover the knowledge learning outcomes all units and provide opportunities for stretch and challenge. For further information about contextualising the tasks, please contact the curriculum team.

Each learner must create a portfolio of evidence generated from appropriate assessment tasks, which demonstrates achievement of all the learning outcomes associated with each unit. The assessment tasks should allow the learner to respond to a real-life situation that they may face when in employment. On completion of each unit, learners must declare that the work produced is their own and the assessor must countersign this. Examples of suitable evidence for the portfolio for each unit are provided in section 2.

A centre may create their own internal assessment tasks. There are 4 essential elements in the production of successful centre-based assessment tasks.

These are:

- ensuring the assessment tasks are meaningful with clear, assessable outcomes
- appropriate coverage of the content, learning outcomes, or assessment criteria
- having a valid and engaging context or scenario
- including sufficient opportunities for stretch and challenge for higher attainers, please see the guidance document for creation of internal assessment tasks on our website

**Section 2: unit content and assessment guidance**

This section provides details of the structure and content of these qualifications.

The types of evidence listed are for guidance purposes only. Within learners' portfolios, other types of evidence are acceptable if all learning outcomes are covered and if the evidence generated can be internally and externally quality assured. For approval of methods of internal assessment other than portfolio building, please contact your external quality assurer.

Tutors should ensure that all tasks are set within realistic scenarios that are simple to understand.

Instructions to learners should be clear and easy to follow.

Where a learner provides non-written responses, the tutor should make a record of these.

Learners must present accurate solutions to their calculations.

Any questions must be worded to work independently and not require accurate answers from any previous questions.

Learners must achieve a minimum of 75% in assessment tasks in order to successfully achieve each unit/qualification.

**Working with whole numbers (Y/505/2740)**

<b>Unit summary</b>	<p>This unit aims to develop a good basic understanding of arithmetic skills and computation associated with working with whole numbers. The unit also helps to secure appropriate strategies for the use of both mental and assisted methods for calculation.</p> <p>The unit provides a useful basis for further mathematical study at this level and learners should possess some form of mathematical attainment at entry level 3 before taking this unit. Learners can also progress to a range of other level 1 units, but most usefully Working with fractions (D/505/2741), Working with money (T/505/2745) and Working in decimals and percentages (H/505/2742). They also have the ability to progress to the level 2 unit Working with whole numbers (L/505/2752).</p>
<b>Credit value</b>	3
<b>Guided learning hours</b>	30
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Understand the principles of working with whole numbers

**The learner can:**

- 1.1 Identify a digit's value by its place in a whole number
- 1.2 Work with the symbols for greater than and less than
- 1.3 Give examples of negative whole numbers in practical contexts

**Learning outcome 2****The learner will:**

- 2 Be able to calculate using whole numbers

**The learner can:**

- 2.1 Find solutions using whole numbers by the following methods:
  - mental
  - written
  - using a calculator

**Learning outcome 3****The learner will:**

3 Understand numerical relationships

**The learner can:**

3.1 Recall multiplication facts up to  $10 \times 10$

3.2 Identify multiples of 50, 100 and 1,000

3.3 Make connections with division facts

3.4 Identify square numbers up to  $10 \times 10$

**Learning outcome 4****The learner will:**

4 Be able to work out simple ratio and direct proportion

**The learner can:**

4.1 Work out simple ratio as the number of parts

4.2 Identify direct proportion as the same rate of increase or decrease

**Learning outcome 5****The learner will:**

5 Be able to estimate when carrying out calculations using whole numbers

**The learner can:**

5.1 Round numbers to the nearest 1,000, 10,000, 100,000 and 1,000,000

5.2 Use estimation to predict answers

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with positive and negative whole numbers in a range of contexts.

Learners are expected to be able to carry out calculations using whole numbers using mental and written methods and using a calculator. Learners should be encouraged to show their workings for written methods or discuss their workings for mental methods or when using a calculator. When they have completed their mental and written methods learners could check their calculations using a calculator.

Tutors could incorporate opportunities for learners to complete calculations by mental or written methods or by using a calculator throughout the assessment of the unit.



**Delivery and assessment**

Alternatively tutors could develop separate summative assessment papers that require learners to demonstrate completion of calculations by mental methods, by written methods or by using a calculator.

Learners must present accurate solutions for all calculations.

**Assessment criteria:** 1.1–1.3, 2.1

**Additional information:** tutors could provide learners with scenarios of practical contexts where negative whole numbers may be naturally encountered (for example, temperature, money). When they have completed their mental and written methods learners could check their calculations using a calculator.

**Assessment criteria:** 2.1

**Additional information:** tutors could provide learners with a range of calculations to complete using whole numbers.

Learners must complete some calculations using mental methods – tutors could use multiple-choice questions for this.

Learners must complete some questions using written methods – tutors could use short-answer questions for this and learners must show their workings.

Learners could complete a separate assessment that requires them to complete a number of calculations using a calculator.

**Assessment criteria:** 2.1, 3.1–3.4

**Additional information:** tutors could provide learners with scenarios relating to multiplication and division facts to enable them to demonstrate their understanding of numerical relationships, (for example, recognising multiples of 2 to 9, up to 100; knowing square numbers up to  $10 \times 10$ ).

When they have completed their mental and written methods learners could check their calculations using a calculator.

**Assessment criteria:** 2.1, 4.1, 4.2

**Additional information:** tutors could provide learners with a range of everyday scenarios that require simple proportion to be calculated, (for example, scaling recipes up and down, diluting drinks, thinning paint).

Learners could check their completed calculations with a calculator.

**Assessment criteria:** 2.1, 5.1, 5.2

**Additional information:** tutors should provide a range of scenarios that require learners to demonstrate estimation or rounding using whole numbers, (for example estimating distances or rounding up attendance figures at a sporting or musical event).

**Delivery and assessment**

Learners should be able to discuss the degree of accuracy required when rounding or estimating with whole numbers.

Learners should also be able to determine if an answer is sensible or not.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

**Working with fractions (D/505/2741)**

<b>Unit summary</b>	This unit will develop skills and build confidence in basic computations with fractions and help the learner begin to work with fractions in practical activities.
<b>Credit value</b>	2
<b>Guided learning hours</b>	20
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Be able to order and compare basic fractions

**The learner can:**

- 1.1 Compare basic fractions and identify:
  - smallest
  - largest
  - equivalence
- 1.2 Simplify basic fractions into an equivalent form, working in appropriate denominators

**Learning outcome 2****The learner will:**

- 2 Be able to order and compare improper fractions and mixed numbers

**The learner can:**

- 2.1 Change improper fractions into mixed numbers
- 2.2 Change mixed numbers into improper fractions
- 2.3 Compare improper fractions and identify:
  - smallest
  - largest

**Learning outcome 3****The learner will:**

- 3 Be able to find parts of whole numbers

**The learner can:**

- 3.1 Find fractions of whole numbers where the whole number is a:
  - number
  - sum of money
  - quantity
  - measurement

**Learning outcome 4****The learner will:**

- 4 Be able to recognise equivalences across fractions, percentages and decimals

**The learner can:**

- 4.1 Convert fractions into percentages  
 4.2 Identify percentage and decimal equivalences of fractions  
 4.3 Use a calculator to state fractions as a decimal

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with fractions, including improper fractions and mixed numbers.

Learners are expected to be able to carry out calculations using fractions, improper fractions and mixed numbers using written methods. Learners should be encouraged to show their workings to demonstrate their grasp of the underpinning knowledge and skills required when working with fractions, improper fractions and mixed numbers.

Learners will use a calculator in learning outcome 4 to convert fractions to decimals.

**Assessment criteria:** 1.1, 1.2

**Additional information:** learners should be able to compare fractions and order them in terms of size. Tutors should provide fractions in a range of denominations for learners to simplify.

**Assessment criteria:** 2.1–2.3

**Additional information:** learners should be able to compare improper fractions and order them in terms of size. Learners should be given a range of improper fractions to convert to mixed numbers and a range of mixed numbers to convert to improper fractions. Learners should be able to check their conversion is correct.

**Assessment criteria:** 3.1

**Additional information:** tutors could provide scenarios that allow learners to demonstrate their knowledge and skills in working with fractions. The scenarios should include everyday familiar contexts that use numbers, sums of money, quantities and measurements.

**Assessment criteria:** 4.1–4.3

**Additional information:** this learning outcome allows learners to demonstrate their skills and knowledge in working with fractions and converting them to percentages and decimals. Learners should be able to recognise equivalences between percentages and decimals and fractions.

Learners may use a calculator to state fractions as decimals.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

**Working with decimals and percentages (H/505/2742)**

<b>Unit summary</b>	This unit develops skills and builds confidence in basic computations involving decimals and percentages and will help the learner begin to work with decimals and percentages on paper and using a calculator.
<b>Credit value</b>	2
<b>Guided learning hours</b>	20
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Know how to write, order and compare decimals and percentages

**The learner can:**

- 1.1 Identify the value of a digit by its place in numbers with up to 3 decimal places
- 1.2 Order and compare decimals and percentages by size

**Learning outcome 2****The learner will:**

- 2 Be able to perform simple calculations using decimals

**The learner can:**

- 2.1 Add and subtract numbers of up to 2 decimal places
- 2.2 Multiply and divide numbers of up to 2 decimal places
- 2.3 Multiply and divide decimals by 10 and 100
- 2.4 Carry out rounding to a whole number and to 2 decimal places

**Learning outcome 3****The learner will:**

- 3 Be able to perform simple calculations using percentages

**The learner can:**

- 3.1 Identify percentages as the number of parts in 100
- 3.2 Calculate simple percentage parts of quantities and measurements
- 3.3 Calculate whole quantities and measurements from simple percentage parts
- 3.4 Calculate simple percentage increases and decreases

**Learning outcome 4****The learner will:**

- 4 Be able to use a calculator to work with decimals and percentages

**The learner can:**

- 4.1 Use a calculator to perform calculations involving decimals  
4.2 Use a calculator to find percentages  
4.3 Use a calculator to perform calculations involving simple percentages

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with decimals and percentages in a range of contexts.

Learners are expected to be able to carry out calculations with decimals and percentages using written methods in the first instance. Learners should be encouraged to show their workings to demonstrate their grasp of the underpinning knowledge and skills required when working with decimals and percentages.

Learners will use a calculator in learning outcome 4 to work with decimals and percentages.

To encourage development of skills using mental methods learners could complete calculations and provide oral responses to tutors.

Whilst developing their skills and knowledge of working with decimals and percentages learners could use a calculator to check their written calculations.

**Assessment criteria:** 1.1, 1.2

**Additional information:** tutors could provide learners with a range of decimal numbers to work with. Learners must correctly identify the value of digits and be able to present the information orally or in written format. Learners can demonstrate their ability to work with decimal numbers by correctly ordering and comparing decimals and percentages by size.

**Assessment criteria:** 2.1–2.4

**Additional information:** tutors could provide learners with a range of calculations using decimal numbers. Learners' calculations should be accurate and should be completed using a written method.

Learners could use their solutions to calculations completed in 2.1–2.3 and round them to whole numbers and to 2 decimal places.

**Delivery and assessment**

**Assessment criteria:** 3.1–3.4

**Additional information:** tutors could provide learners with a range of calculations using percentages. Learners' calculations should be accurate and should be completed using a written method.

Learners should be able to calculate simple percentages from a range of quantities and measurements and work out the whole quantities and measurements from given percentages.

**Assessment criteria:** 4.1–4.3

**Additional information:** tutors could provide a range of questions to allow learners to demonstrate the knowledge and ability to perform calculations involving decimals and percentages.

Learners are expected to be able to use a calculator to find percentages as well as performing calculations.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper



**Working with measurement (K/505/2743)**

<b>Unit summary</b>	In this unit the learner will develop and reinforce a basic level of knowledge and skills associated with working with time, distance and other common units of measurement.
<b>Credit value</b>	2
<b>Guided learning hours</b>	20
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Be able to work with time using the 12 hour and 24 hour formats

**The learner can:**

- 1.1 Tell the time using the 12 hour and 24 hour format  
 1.2 Use straightforward timetables  
 1.3 Convert different units of time  
 1.4 Add and subtract times in hours and minutes  
 1.5 Use common date formats

**Learning outcome 2****The learner will:**

- 2 Be able to work with common units and instruments used in measurement

**The learner can:**

- 2.1 Measure length in metric units with commonly used instruments  
 2.2 Measure weight in metric units  
 2.3 Read temperatures above and below zero in degrees Celsius  
 2.4 Measure and compare capacity using metric units

**Learning outcome 3****The learner will:**

- 3 Be able to calculate distance

**The learner can:**

- 3.1 Use appropriate units for distance  
 3.2 Use mileage charts  
 3.3 Measure distances on a map, using a scale

**Learning outcome 4****The learner will:**

4 Be able to carry out calculations using common units of measure within the same system

**The learner can:**

4.1 Convert between different metric units of:

- length
- weight
- capacity

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable learners to develop strategies for working with measurement in a range of contexts.

Learners are expected to be able to work with the 12 hour and 24 hour clock formats. Learners will demonstrate their ability to use common instruments of measure to calculate distance, weight, volume and temperature.

When performing calculations learners should use written methods to demonstrate their ability to work with units of time or common measures.

Tutors may provide opportunities to develop their mental methods for performing calculations although it is not a specific requirement of this unit.

Learners must ensure that all calculations and measurements are accurate.

**Assessment criteria:** 1.1–1.5

**Additional information:** learners should be familiar with the 12 hour and 24 hour formats. Tutors should ensure that learners have access to clocks that show both formats.

Learners will use their knowledge of reading 12 hour and 24 hour time formats to read simple timetables and convert between different units of time.

Tutors should ensure that common timetables are available for use (for example, bus and train timetables, class timetables).

**Assessment criteria:** 2.1–2.4

**Additional information:** learners should be familiar with the common units of measure and using common instruments of measurement. Tutors should ensure that appropriate instruments of measurement are made available to learners.

Learners should be familiar with positive and negative numbers.

**Delivery and assessment**

**Assessment criteria:** 3.1–3.3

**Additional information:** learners will use maps and mileage charts to enable them to complete the assessment criteria.

Tutors should ensure that maps selected will have a simple scale that is relevant for level 1 learners.

**Assessment criteria:** 4.1

**Additional information:** learner evidence for this learning outcome could be generated when completing learning outcome 2.

Learners must demonstrate their ability and confidence in working with different metric units of length, weight and capacity by converting between different units, such as from millilitres (ml) to litres (l), centimetres (cm) to metres (m).

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

**Working with 2D shapes and space (M/505/2744)**

<b>Unit summary</b>	This unit aims to develop the learner's awareness of the properties and features of 2-dimensional (2D) shapes. The unit also looks at solving problems using mathematical properties of 2D shapes.
<b>Credit value</b>	1
<b>Guided learning hours</b>	10
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Understand the properties and features of 2D shapes

**The learner can:**

- 1.1 Use a protractor to measure and compare angles including:
- right angles
  - angles on straight lines
  - angles within 2D shapes
- 1.2 Identify the properties of the following:
- regular 2D shapes
  - 2D shapes featuring parallel lines
- 1.3 Identify lines of symmetry in 2D shapes
- 1.4 Explain what is meant by lines of symmetry

**Learning outcome 2****The learner will:**

- 2 Be able to carry out measurements and calculations of 2D shapes

**The learner can:**

- 2.1 Work out the perimeter of 2D shapes
- 2.2 Work out the area of 2D shapes, using correct notation

**Learning outcome 3****The learner will:**

- 3 Be able to solve problems using mathematical properties of regular 2D shapes

**The learner can:**

- 3.1 Draw 2D shapes in different orientations using grids
- 3.2 Identify where shapes tessellate if applicable

## Assessment guidance

### Delivery and assessment

The focus of the unit is to enable learners to develop strategies for working with 2D shapes and space. Learners will also develop their knowledge of basic mathematical terms including:

- angles
- right angles
- properties
- parallel lines
- lines of symmetry
- perimeter
- area
- tessellation

Tutors must ensure that learners have access to protractors, rulers and grid paper to enable them to complete the requirements of this unit.

When performing calculations learners should use written methods to demonstrate their ability to work with 2D shapes and space.

Learners must ensure that all calculations and measurements are accurate.

**Assessment criteria:** 1.1–1.4

**Additional information:** learners should be familiar with using a protractor and measuring angles of 2D shapes.

Tutors should provide a range of regular 2D shapes and 2D shapes with parallel lines for learners to work with.

**Assessment criteria:** 2.1, 2.2

**Additional information:** learners should be familiar with working with and measuring 2D shapes.

Learners will need to be familiar with the formula required to calculate the area of a 2D shape.

Learners should present calculations in written format showing their workings to demonstrate achievement of the assessment criteria.

Tutors should provide a range of regular 2D shapes and 2D shapes with parallel lines for learners to work with.

**Delivery and assessment**

**Assessment criteria:** 3.1, 3.2

**Additional information:** learners should be familiar with working with 2D shapes.

Learners will use grids to draw 2D shapes in different orientations. This may be completed by drawing by hand or electronically. If using an online package, learners may utilise any 'snap to grid' functionality available.

Learners should use a variety of 2D shapes, including those which do not tessellate, to ensure they have fully understood the concept of tessellation.

Tutors should provide a range of regular 2D shapes and 2D shapes with parallel lines for learners to work with.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

**Working with money (T/505/2745)**

<b>Unit summary</b>	In this unit learners will develop and secure basic levels of computation and calculation related to sums of money. There is direct progression from this unit to the level 2 unit Working with measurement (D/505/2755), and an entry 3 level maths qualification should provide a sufficient level of skill to serve as an entry requirement.
<b>Credit value</b>	1
<b>Guided learning hours</b>	10
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Know how to place money in terms of value

**The learner can:**

- 1.1 Identify the value of digits in sums of money by their place  
 1.2 Order and compare sums of money  
 1.3 Round up sums of money

**Learning outcome 2****The learner will:**

- 2 Be able to carry out calculations with money

**The learner can:**

- 2.1 Calculate sums of money using:
  - addition
  - subtraction
  - multiplication
  - division
- 2.2 Convert sums of money between figures and words  
 2.3 Use a calculator to check answers to calculations

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with money.

Learners could use pounds sterling as the currency to work with in this unit, but if a learner is more familiar with an alternative currency this may be used instead.

Learners are expected to be able to carry out calculations using basic principles of addition, subtraction, multiplication and division and as such will benefit from completing the level 1 unit Working with whole numbers (Y/505/2740) prior to undertaking this unit.

**Delivery and assessment**

Learners should have access to a calculator to complete assessment criterion 2.3.

Learners should be encouraged to show their workings in writing for calculations completed in this unit.

Learners may also benefit from completing calculations using mental methods to develop their abilities in this skill, although it is not a requirement of the unit.

**Assessment criteria:** 1.1–1.3

**Additional information:** learners should be familiar with working with money and the common currencies available to them.

Learners must order and compare sums of money and it is suggested that the values range from part pounds (for example, 87p), to whole pounds (for example, £32), and whole and part pounds (for example, £26.43).

Learners should round sums of money up to whole pounds, to the nearest £5, £10, £50 and £100.

**Assessment criteria:** 2.1–2.3

**Additional information:** learners should be familiar with working with money and the common currencies available to them.

Learners must complete a range of calculations involving addition, subtraction, multiplication and division. Learners must work with whole numbers and with decimals in their calculations.

Learners must demonstrate their ability to recognise the amounts of sums of money written in words and numbers and convert between the 2 formats.

Once learners have completed their calculations by the written methods they should check their calculations using a calculator.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper



**Working with statistics (A/505/2746)**

<b>Unit summary</b>	<p>This unit will help learners to develop a basic level of awareness about handling data, retrieving data from a range of sources and to be able to make statements about data sets.</p> <p>The learner will benefit from taking units such as level 1 Working with whole numbers (Y/505/2740), level 1 Working in decimals and percentages H/505/2742) and level 1 Working with fractions (D/505/2741) before taking this unit. The level 2 unit Working with statistics (K/505/2757) offers progression from this unit, as would the level 1 unit Working with probability (F/505/2747).</p>
<b>Credit value</b>	2
<b>Guided learning hours</b>	20
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Be able to extract and interpret information

**The learner can:**

- 1.1 Explain how the following provides information:
- title
  - labels
  - key
  - axis
- 1.2 Read a scale on an axis
- 1.3 Find and interpret information from:
- tables
  - diagrams
  - pictograms
- 1.4 Extract and interpret information from:
- bar charts
  - pie charts
  - single line graphs

**Learning outcome 2****The learner will:**

- 2 Be able to work with and present discrete data

**The learner can:**

- 2.1 Present data using appropriate method
- 2.2 Organise data using appropriate method

**Learning outcome 3****The learner will:**

**3** Be able to establish features of a data set

**The learner can:**

**3.1** Calculate the mean for a set of data

**3.2** Calculate the range for a set of data

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with statistics and handling data.

Learners are expected to be able to find, extract and interpret information from a range of sources and should understand the types of information each source can provide.

Tutors should provide information presented in tables, diagrams, pictograms, bar charts, pie charts and single line graphs to enable learners to complete assessment criteria 1.3 and 1.4.

Tutors should provide a range of data to work with and learners will be able to choose the most appropriate method to organise and present this data.

**Assessment criteria:** 1.1–1.4

**Additional information:** learners should be given a range of sources of information in a variety of formats to enable them to demonstrate their ability to find, extract and interpret the information.

Tutors should provide a variety of information that could relate to everyday contexts that the learners may be familiar with (for example, catalogues, holiday brochures, sales figures, temperature charts, stock checks or traffic flow surveys).

**Assessment criteria:** 2.1, 2.2

**Additional information:** learners should demonstrate their ability to organise and present data using the appropriate method. Learners will have to consider the type of data that they have been presented with and decide on the method of organising and presenting the data.

Tutors should provide a range of information that requires learners to organise and present different sets of data in a variety of appropriate ways. This will allow learners to demonstrate their understanding and ability at organising and presenting data. A minimum of 3 sets of data should be provided.

**Delivery and assessment**

**Assessment criteria:** 3.1, 3.2

**Additional information:** learners could use the information provided for learning outcome 2 to aid coverage of this learning outcome. Alternatively, tutors could provide new data sets for learners to work with. To ensure that learners demonstrate complete coverage of this learning outcome, a minimum of 3 different sizes of data sets should be used.

Learners should ensure that the mean and range solutions provided are accurate.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

**Working with probability (F/505/2747)**

<b>Unit summary</b>	This unit will help learners to develop an understanding of probability and to state the likely outcome of events in mathematical terms. The learner will benefit from having taken level 1 Working with whole numbers (Y/505/2740) and level 1 Working with statistics (A/505/2746) before taking this unit.
<b>Credit value</b>	2
<b>Guided learning hours</b>	20
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Understand the basic concepts and terminology associated with probability

**The learner can:**

- 1.1 Define probability
- 1.2 Explain how the probability of an event is measured
- 1.3 Describe how probability is determined
- 1.4 Identify the likelihood of different events happening

**Learning outcome 2****The learner will:**

- 2 Be able to establish the probability of an event

**The learner can:**

- 2.1 Collect data about a topic
- 2.2 Display the data in an appropriate way
- 2.3 Calculate the probability of an event
- 2.4 Express the probability of the event

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with probability and handling data.

Learners are expected to understand the basic concepts and terminology associated with probability and establish the probability of an event occurring.

Tutors should provide a range of information to support learners in the completion of this unit.

**Delivery and assessment**

**Assessment criteria:** 1.1–1.4

**Additional information:** the assessment criteria may be achieved through group/class discussions or individual discussions with tutors or through a short report or presentation.

Learners may cover the assessment criteria through a short oral presentation discussing what probability is, how it is measured, how it is determined and identifying the likelihood of different events happening. Learners could support their presentation with simple examples to help illustrate the points being made.

Tutors can support development of knowledge of probability by presenting it in familiar everyday contexts to aid understanding (for example, getting a head when tossing a coin; getting 2 sixes when rolling a pair of dice; why the cost of travel insurance is more expensive for certain types of holiday; probability of one person in a random group having a birthday in a specific month).

**Assessment criteria:** 2.1–2.4

**Additional information:** learners should collect data about a topic of their choosing in a context that is familiar to them. Tutors should ensure that sufficient data is collected to ensure that calculations are meaningful.

Learners will display the data collected in an appropriate way and will benefit from completing the level 1 Working with statistics unit (A/505/2746) before undertaking this unit.

The probability of an event occurring should be calculated based on the data gathered. Learners should ensure that the result is meaningful and expressed correctly, such as between 0 and 1.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

**Working with basic algebra and geometry (J/505/2748)**

<b>Unit summary</b>	This unit aims to develop a basic understanding of some of the broader mathematics concepts and content, allowing the learner to progress to GCSE maths. In this case, the learner is introduced to some algebra and geometry content and skills. This unit is designed to be taken as part of a wider level 1 maths qualification, where the learner has already built up and secured a range of mathematical knowledge.
<b>Credit value</b>	2
<b>Guided learning hours</b>	20
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Be able to work with straightforward algebraic expressions

**The learner can:**

- 1.1 Manipulate algebraic expressions by collecting like terms  
 1.2 Multiply single algebraic terms over a bracket  
 1.3 Factorise algebraic expressions by taking out common factors

**Learning outcome 2****The learner will:**

- 2 Be able to work with straightforward geometric concepts

**The learner can:**

- 2.1 Identify the angle properties of parallel lines and intersecting lines  
 2.2 Find missing angles in:
  - quadrilaterals
  - triangles

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with basic algebra and geometry.

Learners are expected to be able to carry out calculations using basic algebraic expressions and using common rules for working with them.

Learners will understand angle properties of parallel and intersecting lines and will use basic geometry rules to calculate missing angles in common quadrilaterals and triangles.

Learners should use a written method and show their workings for both learning outcomes.

**Delivery and assessment**

**Assessment criteria:** 1.1–1.3

**Additional information:** tutors could provide learners with a range of straightforward algebraic expressions for learners to work with.

**Assessment criteria:** 2.1, 2.2

**Additional information:** tutors could provide a range of diagrams consisting of parallel and intersecting lines for learners to work with.

A range of basic quadrilaterals and triangles should be provided for learners to complete assessment criterion 2.2. To aid calculation of missing angles, tutors should ensure that the sizes of some angles are provided.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

**Working with mathematical skills (L/505/2749)**

<b>Unit summary</b>	This unit will develop a basic understanding of some of the national occupational standards associated with Functional Skills, allowing the learner to progress to a Functional Skills qualification in maths. This unit is designed to be taken as part of a wider level 1 maths qualification, where the learner has already built up and secured a range of mathematical knowledge.
<b>Credit value</b>	2
<b>Guided learning hours</b>	20
<b>Level</b>	1

**Learning outcome 1****The learner will:**

- 1 Be able to work with mathematical skills to solve straightforward practical problems

**The learner can:**

- 1.1 Describe straightforward, practical mathematical problems  
 1.2 Interpret the information provided to tackle the problem  
 1.3 Work with given mathematical skills to find solutions  
 1.4 Use checking procedures to ensure accurate outcomes  
 1.5 Communicate solutions and results clearly and accurately

**Assessment guidance****Delivery and assessment**

The focus of the unit is to enable the learner to develop strategies for working with mathematical skills to solve straightforward practical problems.

The learner will be able to draw on the skills, knowledge and understanding developed throughout the level 1 maths units when undertaking this unit. They will find the level 1 units in Working with whole numbers (Y/505/2740), Working with 2D shapes and space (M/505/2744), Working with measurement (K/505/2743), Working with statistics (A/505/2746) and Working with probability (F/505/2747) units particularly useful prerequisites to this unit.

Learners will be expected to use the written method when solving problems and show all workings completed throughout the unit.

Learners may use a calculator to check their solutions to problems.



**Delivery and assessment**

**Assessment criteria:** 1.1–1.5

**Additional information:** tutors could provide learners with a range of straightforward, practical problems that may be solved working with the mathematical skills developed.

The problems should be within contexts familiar to learners whilst allowing the demonstration of mathematical skills and knowledge. Learners are expected to find or calculate some of the necessary information to enable them to find a solution to the problem.

Solutions must be presented in written form and learners may support this with a short oral presentation to discuss how they approached the problem and arrived at the solution.

**Types of evidence**

Evidence could include:

- learner evidence
- multiple-choice and/or short-answer question paper

### **Section 3: support**

#### **Support materials**

The following support materials are available to assist with the delivery of these qualifications and are available on the NCFE website:

- learner's evidence tracking log (LETL)
- learning resources

#### **Other support materials**

The resources and materials used in the delivery of these qualifications must be age-appropriate and due consideration should be given to the wellbeing and safeguarding of learners in line with your institute's safeguarding policy when developing or selecting delivery materials.

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## Contact us

NCFE  
Q6  
Quorum Park  
Benton Lane  
Newcastle upon Tyne  
NE12 8BT

Tel: 0191 239 8000\*  
Fax: 0191 239 8001  
Email: [customersupport@ncfe.org.uk](mailto:customersupport@ncfe.org.uk)  
Website: [www.ncfe.org.uk](http://www.ncfe.org.uk)

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