Ascentis Level 2 Award in Mathematical Skills

- Understanding Numbers and Formulae
- Understanding and Using Fractions, Ratios and Proportion
- Understanding and Using Decimals
- Understanding and Using Percentages
- Understanding Money, Time and Temperature
- Understanding Length, Weight and Capacity
- Understanding Shape and Space
- Handling Data
- Data Calculations
- Probability

Ascentis Level 2 Certificate in Mathematical Skills

Specification

**Ofqual Number** (See page 4 of the specification)

| | |
|---|---|
| Ofqual Start Date | 01/09/2013 |
| Ofqual Review Date | 31/07/2020 |
| Ofqual Certification Review Date | 31/07/2021 |

# ABOUT ASCENTIS

Ascentis was originally established in 1975 as OCNW, a co-operative scheme between Universities and Colleges of Further Education. Ascentis was the first 'Open College' in the UK and served the needs of its members for over 34 years. Throughout this period, OCNW grew yet maintained its independence in order that it could continue to respond to the requirements of its customers and provide a consistently high standard of service to all centres across the country and in recent years to its increasing cohorts of overseas learners.

In 2009 OCNW became Ascentis - a company limited by guarantee and a registered educational charity.

**Ascentis** is distinctive and unusual in that it is both

▪ **An Awarding Organisation** regulated by the Office of Qualifications and Examinations Regulation (Ofqual)

**and**

▪ **an Access Validating Agency (AVA)** for 'Access to HE Programmes' licensed by the Quality Assurance Agency for Higher Education (QAA).

Ascentis is therefore able to offer a comprehensive ladder of opportunities to centres and their students, including Foundation Learning, vocational programmes and progressing to QAA recognised Access to HE qualifications. The flexible and adult-friendly ethos of Ascentis has resulted in centres throughout the UK choosing to run its qualifications.

## ASCENTIS CONTACT DETAILS

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# ASCENTIS LEVEL 2 AWARDS IN MATHEMATICAL SKILLS

**Introduction**

The Ascentis Level 2 Awards in Mathematical Skills and the Level 2 Certificate in Mathematical Skills are ideal qualifications for adults and young people wishing to develop their mathematical skills at Level 2. They are intended to aid progression, either to further study through Mathematics Functional Skills or GCSE Mathematics qualifications. The Ascentis Level 2 Awards in Mathematical Skills are a range of small qualifications which have been designed to 'bridge the gap' in learners' mathematical knowledge, thus focussing on developing confidence and ability.

There are several features of these qualifications that make them very appropriate for their target learners:

- Wide range of single unit Awards – 10 in total
- Relatively short qualifications of either 10 or 20 guided learning hours – bite sized learning
- Can be delivered either as a classroom based course or as a blended learning programme
- Assessed by completion of Ascentis designed assessment – no portfolio of evidence required
- Verification and certification can be offered throughout the year, allowing maximum flexibility for centres

**Aims**

The aims of this suite of qualifications are to enable learners:

1  To gain underpinning mathematical skills
2  To bridge the gap in their mathematical knowledge
3  To prepare for the completion of the Functional Skills in Mathematics at Level 2 or GCSE Mathematics
4  To progress onto the Ascentis Level 2 Awards in Mathematical Skills
5  To develop the skills required to move into the world of work or work-based learning

**Target Group**

These qualifications are aimed at a range of learners, including

- Adults who wish to develop and demonstrate their skills in Mathematics
- Young people aged 14 – 19 who wish to develop and demonstrate their skills in some aspects of Mathematics.

**Ofqual Qualification Numbers**

Ascentis Level 2 Award in Mathematical Skills – Understanding Numbers and Formulae - 601/0973/7
Ascentis Level 2 Award in Mathematical Skills – Understanding and Using Fractions, Ratios and Proportion - 601/0969/5
Ascentis Level 2 Award in Mathematical Skills – Understanding and Using Decimals - 601/0967/1
Ascentis Level 2 Award in Mathematical Skills – Understanding and Using Percentages - 601/0968/3
Ascentis Level 2 Award in Mathematical Skills – Understanding Money, Time and Temperature - 601/0972/5
Ascentis Level 2 Award in Mathematical Skills – Understanding Length, Weight and Capacity - 601/0971/3
Ascentis Level 2 Award in Mathematical Skills – Understanding Shape and Space - 601/0742/X
Ascentis Level 2 Award in Mathematical Skills – Handling Data - 601/0740/6
Ascentis Level 2 Award in Mathematical Skills – Data Calculations - 601/0966/X
Ascentis Level 2 Award in Mathematical Skills – Probability - 601/0741/8
Ascentis Level 2 Certificate in Mathematical Skills - 601/1035/1

## Rationale for the Rules of Combination

Learners must complete one unit for each Award at Level 2. These are single unit qualifications and certification is given for achieving a pass in the Ascentis designed assessment.

Learners who achieve a minimum of 13 credits using any combination of the Level 2 Awards may wish to claim a Level 2 Certificate in Mathematical Skills.

## Rules of Combination

| Ascentis Level 2 Award in Mathematical Skills - Understanding Numbers and Formulae | | | |
|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding Numbers and Formulae | 2 | 1 | 10 | Y/505/2270 |

| Ascentis Level 2 Award in Mathematical Skills – Understanding and Using Fractions, Ratios and Proportion | | | |
|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding and Using Fractions, Ratios and Proportion | 2 | 2 | 20 | F/505/2280 |

| Ascentis Level 2 Award in Mathematical Skills – Understanding and Using Decimals | | | |
|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding and Using Decimals | 2 | 1 | 10 | J/505/2314 |

| Ascentis Level 2 Award in Mathematical Skills - Understanding and Using Percentages | | | |
|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding and Using Percentages | 2 | 2 | 20 | L/505/2332 |

| Ascentis Level 2 Award in Mathematical Skills - Understanding Money, Time and Temperature | | | |
|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding Money, Time and Temperature | 2 | 1 | 10 | H/505/2336 |

| Ascentis Level 2 Award in Mathematical Skills - Understanding Length, Weight and Capacity | | | |
|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding Length, Weight and Capacity | 2 | 1 | 10 | T/505/2339 |

| Ascentis Level 2 Award in Mathematical Skills – Understanding Shape and Space | | | | |
|---|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding Shape and Space | 2 | 2 | 20 | F/505/2344 |

| Ascentis Level 2 Award in Mathematical Skills – Handling Data | | | | |
|---|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Handling Data | 2 | 2 | 20 | R/505/2347 |

| Ascentis Level 2 Award in Mathematical Skills – Data Calculations | | | | |
|---|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Data Calculations | 2 | 1 | 10 | Y/505/2348 |

| Ascentis Level 2 Award in Mathematical Skills - Probability | | | | |
|---|---|---|---|---|
| Title | Level | Credit Value | GLH | Unit ref |
| Probability | 2 | 1 | 10 | D/505/2352 |

| Ascentis Level 2 Certificate in Mathematical Skills | | | | |
|---|---|---|---|---|
| | | | | Credits: 13 |
| Title | Level | Credit Value | GLH | Unit ref |
| Understanding Numbers and Formulae | 2 | 1 | 10 | Y/505/2270 |
| Understanding and Using Fractions, Ratios and Proportion | 2 | 2 | 20 | F/505/2280 |
| Understanding and Using Decimals | 2 | 1 | 10 | J/505/2314 |
| Understanding and Using Percentages | 2 | 2 | 20 | L/505/2332 |
| Understanding Money, Time and Temperature | 2 | 1 | 10 | H/505/2336 |
| Understanding Length, Weight and Capacity | 2 | 1 | 10 | T/505/2339 |
| Understanding Shape and Space | 2 | 2 | 20 | F/505/2344 |
| Handling Data | 2 | 2 | 20 | R/505/2347 |
| Data Calculations | 2 | 1 | 10 | Y/505/2348 |
| Probability | 2 | 1 | 10 | D/505/2352 |
| Credits from equivalent Units:<br> Please contact the Ascentis office to request equivalences, and ask to speak to a member of the Qualifications Development Team. | | | | |

**Recommended Prior Knowledge, Attainment and/or Experience**

Learners should be able to evidence a level of mathematical skill to at least Level 1 prior to starting to study these qualifications.

**Recommended Guided Learning Hours**

The recommended guided learning hours are –

Level 2 Award in Mathematical Skills – Understanding Numbers and Formulae - 10
Level 2 Award in Mathematical Skills – Understanding and Using Fractions, Ratios and Proportion – 20
Level 2 Award in Mathematical Skills – Understanding and Using Decimals – 10
Level 2 Award in Mathematical Skills – Understanding and Using Percentages - 20
Level 2 Award in Mathematical Skills – Understanding Money, Time and Temperature – 10
Level 2 Award in Mathematical Skills – Understanding Length, Weight and Capacity - 10
Level 2 Award in Mathematical Skills – Understanding Shape and Space - 20
Level 2 Award in Mathematical Skills – Handling Data – 20
Level 2 Award in Mathematical Skills – Data Calculations - 10
Level 2 Award in Mathematical Skills – Probability - 10
Level 2 Certificate in Mathematical Skills - 130


**Total Qualification Time**

The total qualification time is –

Level 2 Award in Mathematical Skills – Understanding Numbers and Formulae - 10
Level 2 Award in Mathematical Skills – Understanding and Using Fractions, Ratios and Proportion – 20
Level 2 Award in Mathematical Skills – Understanding and Using Decimals – 10
Level 2 Award in Mathematical Skills – Understanding and Using Percentages - 20
Level 2 Award in Mathematical Skills – Understanding Money, Time and Temperature – 10
Level 2 Award in Mathematical Skills – Understanding Length, Weight and Capacity - 10
Level 2 Award in Mathematical Skills – Understanding Shape and Space - 20
Level 2 Award in Mathematical Skills – Handling Data – 20
Level 2 Award in Mathematical Skills – Data Calculations - 10
Level 2 Award in Mathematical Skills – Probability - 10
Level 2 Certificate in Mathematical Skills - 130


**Age Range of Qualification**

These qualifications are suitable for young people aged 14 – 19 and adult learners.


**Opportunities for Progression**

These qualifications offer

- The opportunity to move towards Mathematics Functional Skills at level 2 or GCSE Mathematics
- Evidence of achievement for learners moving into the world of work or work-based learning

**Mapping/Relationship to National Occupational Standards**

These qualifications are mapped to the Adult Numeracy Core Curriculum. This can be viewed at: http://www.excellencegateway.org.uk/sflcurriculum


**Centre Recognition**

This qualification can only be offered by centres recognised by Ascentis and approved to run this qualification. Details of the centre recognition and qualification approval process are available from the Ascentis office (tel. 01524 845046) or from the website at www.ascentis.co.uk.

## Qualification Approval

If your centre is already a recognised centre, you will need to complete and submit a qualification approval form to deliver this qualification. Details of the qualification approval process are available from the Ascentis office (tel. 01524 845046) or from the website at www.ascentis.co.uk.


## Registration

All learners **MUST** be registered electronically via the Ascentis electronic registration portal prior to the intended assessment date.


## Status in England, Wales and Northern Ireland

This qualification is available in England, Wales and Northern Ireland. It is only offered in English. If a centre based overseas (including Scotland) would like to offer this qualification, they should make an enquiry to Ascentis.


## Reasonable Adjustments and Special Considerations

In the development of these qualifications Ascentis has made every attempt to ensure that there are no unnecessary barriers to achievement, for candidates with particular requirements reasonable adjustments may be made in order that candidates can have fair assessment and demonstrate attainment. All assessment papers may be enlarged, if required, with the exception of the **Understanding Length, Weight and Capacity** assessment paper. If enlargement of this paper is required, please contact the Ascentis office prior to the assessment. There are also arrangements for special consideration for any candidate suffering illness, injury or indisposition. Full details of the reasonable adjustments and special considerations are available from the Resources/Key Documents area of the Ascentis website www.ascentis.co.uk or through contacting the Ascentis office.


## Enquiries and Appeals Procedure

Ascentis has an appeals procedure in accordance with the regulatory arrangements in the Ofqual *General Conditions of Recognition*. Full details of this procedure, including how to make an application, are available from the Resources/Key Documents area of the Ascentis website www.ascentis.co.uk or through contacting the Ascentis office.

# ASSESSMENT ARRANGEMENTS

**Assessment**

Each unit is assessed through an assessment to be taken under supervised conditions. Guide times are provided for each assessment. The assessment is then internally assessed and verified by the centre and then externally verified by Ascentis.

The assessment assesses directly the mathematical skills within the unit and may contain questions that require the learner to apply the skills they have learnt to simple practical situations.

The learner will evidence achievement of all the Assessment Criteria for each unit by completing the Ascentis-designed assessment for that unit. Once a learner has all the evidence for an Award or the Certificate, the assessor is required to complete the Summary Record of Achievement for each learner. The Summary Record of Achievement form is provided in Appendix 1.

Centres are required to retain all evidence from all learners for external verification and for 4 weeks afterwards should any appeal be made. The work should be kept in the centre under secure conditions.

**Ascentis Designed Assessments**

Each Level 2 Award is assessed through an Ascentis designed assessment. This must be conducted in centres under supervised conditions. Learners may re-sit the assessment three times.

These assessments are available to download in the secure examinations section of Ascentis' on-line portal. Once a centre has received qualification approval, access to the assessments will be given to the Examination Officer within the centre. The assessments need to be stored in secure conditions. Three sets of live assessments will be made available.

# VERIFICATION ARRANGEMENTS

**Internal Verification**

Internal verification is the process of ensuring that everyone who assesses a particular unit in a centre is assessing to the same standards i.e. consistently and reliably. Internal verification activities will include: ensuring any stimulus or materials used for the purposes of assessment are fit for purpose; sampling assessments; standardisation of assessment decisions; standardisation of internal verification decisions. Internal Verifiers are also responsible for supporting assessors by providing constructive advice and guidance in relation to the qualification delivered.

Further information is available from the Resources/Key Documents section of the Ascentis website www.ascentis.co.uk

**External Verification**

In order to support the roll-on, roll-off nature of this provision, which is likely to be offered over short time scales, Ascentis will offer a flexible approach to External Verification. This will include verification by post.

Recognised centres will be visited in accordance with a verification model that is considered most appropriate for the provision. More frequent verifications can be requested from the Ascentis Quality Assurance team, for which there is usually an additional charge. External verification will usually focus on the following areas:

- A review of the centres management of the regulated provision
- The levels of resources to support the delivery of the qualification, including both physical resources and staffing
- Ensuring the centre is using appropriate assessment methods and making appropriate assessment decisions according to Ascentis' requirements
- Ensuring the centre has appropriate internal quality assurance arrangements as outlined within the relevant qualification specification
- Checking that the centre is using appropriate administrative arrangements to support the function of delivery and assessment

External Verifiers will usually do this through discussion with the centre management team; assessment and Internal Quality Assurance staff; verifying a sample of learners' evidence; talking to learners, reviewing relevant centre documentation and systems.

**Knowledge, Understanding and Skills required of Assessors and Internal Verifiers**

Assessors and those delivering these qualifications should be knowledgeable and competent within the areas of Mathematics and Numeracy in which they are making assessment decisions/delivering these qualifications.

Centres are responsible for ensuring that all staff involved in the delivery of the qualification are appropriately qualified. Ascentis will not be held responsible for any issues that relate to centre staffing which could impact on the successful delivery, assessment and internal quality assurance of our qualifications.

Those delivering the qualification should preferably hold or be working towards a recognised teaching qualification. Assessors must be able to make appropriate assessment decisions. Internal Quality Assurers need to have knowledge and experience of the internal quality assurance processes.

Centres are required to ensure that appropriate training and support is in place for staff involved in the delivery, assessment and internal verification of Ascentis qualifications.

Ascentis offers free support for centres. Further information on the support that is available can be found on Quartz Web or the Ascentis website.

# UNIT SPECIFICATIONS

## Understanding Numbers and Formulae

**Credit Value of Unit 1**          **GLH of Unit 10**          **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to compare and carry out calculations which involve both positive and negative numbers of any size as well as evaluating formulae.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
N1/L2.1, N1/L2.2, N2/L2.4

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes<br><br>The learner will be able to | Assessment Criteria<br><br>The learner can |
|---|---|
| 1 Be able to read positive and negative numbers of any size | 1.1 Read positive numbers of any size in digit form |
| | 1.2 Read negative numbers of an size in digit form |
| 2 Be able to write positive and negative numbers of any size | 2.1 Write positive numbers of any size in digit form |
| | 2.2 Write negative numbers of any size in digit form |
| 3 Be able to order and compare positive and negative numbers of any size in practical context | 3.1 Order positive and negative numbers in order of size |
| | 3.2 Compare positive and negative numbers of any size |
| 4 Be able to carry our calculations with numbers of any size using efficient methods | 4.1 Carry out multi-step calculations in an everyday situation |
| | 4.2 Check calculations using calculator |
| | 4.3 Use a calculator efficiently to add, subtract, multiply, and divide |
| 5 Be able to evaluate expressions and make substitutions in given formulae in words and symbols to produce results | 5.1 Carry out calculations in the correct order (BODMAS) |
| | 5.2 Match expressions in words and symbols |
| | 5.3 Multiply when there is no operator between a number and one or more variable |
| | 5.4 Evaluate simple formulae using brackets |
| | 5.5 Evaluate simple expressions by using substitution |

# UNIT SPECIFICATIONS

## Understanding and Using Fractions, Ratios and Proportion

**Credit Value of Unit 2**          **GLH of Unit 20**          **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to convert between fractions, decimals and percentages as well as being able to calculate ratio and direct proportion. This unit assumes that the learner has prior skills in using numbers at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding Numbers and Formulae unit at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using numbers through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
N1/L2.3, N2/L2.1, N2/L2.2, N2/L2.3, N2/L2.4, N2/L2.10

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes | Assessment Criteria |
|---|---|
| The learner will be able to | The learner can |
| 1  Be able to use fractions to order and compare amounts or quantities | 1.1  Reduce a fraction to its simplest form |
|  | 1.2  Order fractions with the same denominators |
|  | 1.3  Order fractions with different denominators |
|  | 1.4  Use fractions to compare amounts or quantities |
| 2  Be able to identify equivalences between fractions, decimals and percentages | 2.1  Convert a given fraction to a decimal and a percentage |
|  | 2.2  Convert a given decimal to a fraction and a decimal |
|  | 2.3  Convert a given percentage to a fraction and a decimal |
|  | 2.4  Arrange fractions, decimals and percentages in order of size |
| 3  Be able to evaluate one number as a fraction of another | 3.1  Calculate a number as a fraction of another, giving the answer in its simplest form |
| 4  Be able to find a fraction of an amount or quantity | 4.1  Find a fraction of an amount or quantity |
| 5  Be able to use fractions to add or subtract amounts or quantities | 5.1  Use fractions to add or subtract a range of amounts or quantities |
|  | 5.2  Use a calculator to add or subtract fractions efficiently |
|  | 5.3  Use a calculator to check fraction calculations |
| 6  Be able to calculate ratio and direct proportion | 6.1  Calculate quantities using ratio in the form of a:b or a:b:c |
|  | 6.2  Perform calculations using direct proportion in an everyday situation |

# UNIT SPECIFICATIONS

## Understanding and Using Decimals

**Credit Value of Unit 1**          **GLH of Unit 10**          **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to compare and perform calculations with decimals. This unit assumes that the learner has prior skills in using numbers at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding Numbers and Formulae unit at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using numbers through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
N2/L2.5, N2/L2.6

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes | Assessment Criteria |
|---|---|
| The learner will be able to | The learner can |
| 1    Be able to approximate decimals by rounding | 1.1   Round numbers with three decimal places to two decimal places |
| | 1.2   Round numbers with two decimals places to one decimal place |
| | 1.3   Round numbers with one decimal place to a whole number |
| | 1.4   Round answers from a calculator to an appropriate degree of accuracy |
| 2    Be able to order and compare decimals | 2.1   Order decimals up to three decimal places |
| | 2.2   Compare decimals up to three decimals places |
| 3    Be able to add decimals up to three decimal places in an everyday situation | 3.1   Add decimals using efficient written methods |
| | 3.2   Add decimals using efficient calculator methods |
| 4    Be able to subtract decimals up to three decimal places in an everyday situation | 4.1   Subtract decimals using efficient written methods |
| | 4.2   Subtract decimals using efficient calculator methods |
| 5    Be able to multiply decimals up to three decimal places in an everyday situation | 5.1   Multiply decimals by numbers of any value using efficient written methods |
| | 5.2   Multiply decimals by numbers of any value using efficient calculator methods |
| 6    Be able to divide decimals up to three decimal places in an everyday situation | 6.1   Divide decimals by numbers of any value using efficient written methods |
| | 6.2   Divide decimals by numbers of any value using efficient calculator methods |

# UNIT SPECIFICATIONS

## Understanding and Using Percentages

**Credit Value of Unit 2**      **GLH of Unit 20**      **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to compare and calculate with percentages. This unit assumes that the learner has prior skills in using fractions and decimals at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding Fractions, Ratios and Proportion and the Understanding and Using Decimals units at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using fractions and decimals through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
N2/L2.7, N2/L2.8, N2/L2.9, N2/L2.10

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes<br><br>The learner will be able to | Assessment Criteria<br><br>The learner can |
|---|---|
| 1    Be able to order and compare percentages | 1.1   Order percentage |
| | 1.2   Compare percentages |
| 2    Be able to calculate percentage increase | 2.1   Calculate a percentage increase |
| 3    Be able to calculate percentage decrease | 3.1   Calculate a percentage decrease |
| 4    Be able to find percentage parts of quantities and measurements | 4.1   Calculate percentage parts of quantities and measurements using efficient written methods |
| | 4.2   Calculate percentage parts of quantities and measurements using a calculator |
| | 4.3   Calculate percentage parts of quantities and measurements using an alternative method |
| 5    Be able to evaluate one number as a percentage of another | 5.1   Calculate one number as a percentage of another by changing a fraction to a percentage |

# UNIT SPECIFICATIONS

## Understanding Money, Time and Temperature

**Credit Value of Unit 1**          **GLH of Unit 10**          **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to perform calculations involving sums of money in addition to recording time and temperature. This unit assumes that the learner has prior skills in using decimals at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding and Using Decimals unit at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using decimals through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS1/L2.1, MSS1/L2.2, MSS1/L2.4, MSS1/L2.5, MSS1/L2.6

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes | Assessment Criteria |
|---|---|
| The learner will be able to | The learner can |
| 1    Be able to calculate with sums of money and convert between currencies | 1.1   Perform a range of calculations using sums of money |
| | 1.2   Perform a range of calculations to convert from sterling to different currencies |
| | 1.3   Perform a range of calculations to convert to sterling from different currencies |
| 2    Be able to calculate, measure and record time in different formats | 2.1   Describe the different units for measuring time |
| | 2.2   Convert between units of time |
| | 2.3   Calculate durations of time using 12hr and 24hr clock times |
| | 2.4   Calculate durations of time using a calendar |
| | 2.5   Record durations of time, in different formats |
| 3    Be able to calculate, measure and record temperature | 3.1   Measure and record temperature using appropriate units to an appropriate degree of accuracy |
| | 3.2   Carry out calculations involving units within the same measurement system in an everyday situation |
| | 3.3   Carry out calculations involving units in different measurement systems using conversion tables and scales |

# UNIT SPECIFICATIONS

## Understanding Length, Weight and Capacity

**Credit Value of Unit 1**  **GLH of Unit 10**  **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to estimate, measure and compare length, weight and capacity using both metric and imperial units. This unit assumes that the learner has prior skills in using decimals at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding and Using Decimals unit at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using decimals through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS1/L2.3, MSS1/L2.5, MSS1/L2.6

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes<br><br>The learner will be able to | Assessment Criteria<br><br>The learner can |
|---|---|
| 1  Be able to estimate, measure and compare length using metric and imperial units | 1.1  Measure and compare length using metric units to an appropriate degree of accuracy |
| | 1.2  Carry out calculations involving units within the same measurement system |
| | 1.3  Carry out calculations involving units in different measurement systems using conversions tables and scales |
| | 1.4  Approximate conversion factors in an everyday situation |
| 2  Be able to estimate, measure and compare weight using metric and imperial units | 2.1  Measure and compare weight using metric units to an appropriate degree of accuracy |
| | 2.2  Cary out calculations involving units within the same measurement system |
| | 2.3  Carry out calculations involving units in different measurement systems using conversion tables and scales |
| | 2.4  Approximate conversion factors in an everyday situation |
| 3  Be able to estimate, measure and compare capacity using metric and imperial units | 3.1  Measure and compare capacity using metric units to an appropriate degree of accuracy |
| | 3.2  Carry out calculations involving units within the same measurement system |
| | 3.3  Carry out calculations involving units in different measurement systems using conversion tables and scales |
| | 3.4  Approximate conversion factors in an everyday situation |

# UNIT SPECIFICATIONS

## Understanding Shape and Space

**Credit Value of Unit 2**          **GLH of Unit 20**          **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to calculate perimeters, areas and volumes of shapes and use scale drawings. This unit assumes that the learner has prior skills in using formulae at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding Numbers and Formulae unit at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using formulae through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS1/L2.7, MSS1/L2.8, MSS1/L2.9, MSS1/L2.10, MSS2/L2.1, MSS2/L2.2

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes | | Assessment Criteria | |
|---|---|---|---|
| The learner will be able to | | The learner can | |
| 1 | Be able to understand and use given formulae for finding perimeters of shapes | 1.1 | Calculate perimeters of regular shapes using given formulae |
| 2 | Be able to understand and use given formulae for finding areas of shapes | 2.1 | Calculate areas of regular shapes using given formulae |
| | | 2.2 | Calculate areas of composite shapes using given formulae |
| 3 | Be able to understand and use given formulae for finding volumes of shapes | 3.1 | Calculate volumes of regular shapes using given formulae |
| 4 | Be able to work out dimensions from scale drawings | 4.1 | Calculate measurements from plans and scale drawings using different scales |
| 5 | Be able to recognise and use common 2D representations of 3D shapes | 5.1 | Use 2D representations of 3D objects in maps or plans |
| 6 | Be able to solve problems involving 2D shapes and parallel lines | 6.1 | Identify parallel lines on common 2D shapes |
| | | 6.2 | Use the properties of parallel lines to solve problems in an everyday situation |

# UNIT SPECIFICATIONS

**Handling Data**

| **Credit Value of Unit 2** | **GLH of Unit 20** | **Level of Unit 2** |
|---|---|---|

**Introduction**

This unit will give learners an opportunity to extract, interpret, organise and represent data using charts and graphs.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
HD1/L2.1, HD1/L2.2

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes<br><br>The learner will be able to | Assessment Criteria<br><br>The learner can |
|---|---|
| 1  Be able to extract and interpret discrete and continuous data from everyday situations | 1.1  Define discrete data |
| | 1.2  Define continuous data |
| | 1.3  Extract discrete and/or continuous data from<br>   ▪ Tables<br>   ▪ Diagrams<br>   ▪ Charts<br>   ▪ Line graphs |
| | 1.4  Interpret discrete and/or continuous data from<br>   ▪ Tables<br>   ▪ Diagrams<br>   ▪ Charts<br>   ▪ Line graphs |
| 2  Be able to organise and represent discrete data | 2.1  Organise discrete data for representation |
| | 2.2  Construct complex table |
| | 2.3  Construct pie charts |
| | 2.4  Construct composite bar charts |
| | 2.5  Describe the effects of using different scales in representations |
| 3  Be able to organise and represent continuous data | 3.1  Represent continuous data in a line graph |
| | 3.2  Identify trends from an analysis of the slope of the line |

# UNIT SPECIFICATIONS

**Data Calculations**

**Credit Value of Unit 1**          **GLH of Unit 10**          **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to calculate the measures of spread for sets of data. This unit assumes that the learner has prior skills in using numbers at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding Numbers and Formulae unit at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using numbers through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
HD1/L2.3, HD1/L2.4

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes | Assessment Criteria |
|---|---|
| The learner will be able to | The learner can |
| 1    Be able to find the mean, median and mode, and use them as appropriate to compare two sets of data | 1.1   Find the mean for sets of data |
| | 1.2   Find the median for sets of data |
| | 1.3   Find the mode for sets of data |
| | 1.4   Compare the mean, median and mode for different sets of data |
| | 1.5   State the different purposes for which the mean, median and mode can be used in an everyday situation |
| 2    Be able to find the range and use it to describe the spread within sets of data | 2.1   Calculate the range of sets of data |
| | 2.2   Compare the ranges of sets of data |

# UNIT SPECIFICATIONS

**Probability**

**Credit Value of Unit 1**                    **GLH of Unit 10**                    **Level of Unit 2**

**Introduction**

This unit will give learners an opportunity to understand probability and use tree diagrams. This unit assumes that the learner has prior skills in using fractions and decimals at Level 2. These skills may have been gained through the achievement of the Ascentis Understanding Fractions, Ratios and Proportion and the Understanding and Using Decimals units at Level 2 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in using fractions and decimals through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
HD2/L2.1

Assessment will be through the completion of an assessment which will be carried out under supervised conditions.

| Learning Outcomes | Assessment Criteria |
|---|---|
| The learner will be able to | The learner can |
| 1   Be able to identify the range of possible outcomes of combined events and record the information using tables | 1.1   Record the possible outcomes of combined events in tables in an everyday situation |
| | 1.2   Calculate the probability of combined events in tables |
| 2   Be able to identify the range of possible outcomes of combined events and record the information using diagrams | 2.1   Record the possible outcomes of combined events in tree diagrams in an everyday situation |
| | 2.2   Calculate the probability of combined events in tree diagrams |

**Summary Record of Achievement**

**Level 2 Award/Certificate in Mathematical Skills**

Learner Name _____

| Unit Title | Level | Credit Value | Date completed | Assessor Signature | Internal Verifier Signature (if sampled) |
|---|---|---|---|---|---|
| Understanding Numbers and Formulae | 2 | 1 | | | |
| Understanding and Using Fractions, Ratios and Proportion | 2 | 2 | | | |
| Understanding and Using Decimals | 2 | 1 | | | |
| Understanding and Using Percentages | 2 | 2 | | | |
| Understanding Money, Time and Temperature | 2 | 1 | | | |
| Understanding Length, Weight and Capacity | 2 | 1 | | | |
| Understanding Shape and Space | 2 | 2 | | | |
| Handling Data | 2 | 2 | | | |
| Data Calculations | 2 | 1 | | | |
| Probability | 2 | 1 | | | |

Minimum Credit Value of Qualification  _____

Assessor Signature _____

Internal Verifier Signature (if sampled) _____

**Functional Skills Opportunities**

Learners following a course based on this specification can be offered opportunities to develop and generate evidence of achievement in aspects of the following Functional Skill. Examples of such opportunities are given below.

**Mathematics**

**Level 2**

| Skill Standards | Coverage and range (indicative) |
|---|---|
| **Representing**<br>▪ Understand routine and non-routine problems in familiar and unfamiliar contexts and situations<br>▪ Identify the situation or problems and identify the mathematical methods needed to solve them<br>▪ Choose from a range of mathematics to find solutions<br>**Assessment weighting 30 - 40%**<br><br>**Analysing**<br>▪ Apply a range of mathematics to find solutions<br>▪ Use appropriate checking procedures and evaluate their effectiveness at each stage<br>**Assessment weighting 30 - 40%**<br><br>**Interpreting**<br>▪ Interpret and communicate solutions to multistage practical problems in familiar and unfamiliar contexts and situations<br>▪ Draw conclusions and provide mathematical justifications<br><br><br><br><br>**Assessment weighting 30 - 40%** | ▪ Understand and use positive and negative numbers of any size in practical contexts<br>▪ Carry out calculations with numbers of any size in practical contexts, to a given number of decimal places<br>▪ Understand, use and calculate ratio and proportion, including problems involving scale<br>▪ Understand and use equivalences between fractions, decimals and percentages<br>▪ Understand and use simple formulae and equations involving one- or two- step operations<br>▪ Recognise and use 2D representations of 3D objects<br>▪ Find area, perimeter and volume of common shapes<br>▪ Use, convert and calculate using metric and, where appropriate, imperial measures<br>▪ Collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate<br>▪ Use and interpret statistical measures, tables and diagrams, for discrete and continuous data, using information and communication technology (ICT) where appropriate<br>▪ Use statistical methods to investigate situations<br>▪ Use probability to assess the likelihood of an outcome |
| **Examples:** | |
| ▪ **Each individual unit offers the opportunity to develop the under pinning knowledge for at least one of the coverage and range statements above** | |

**Spiritual, Moral, Ethical, Social, Legislative, Economic and Cultural Issues**

These qualifications offer opportunities for learners to develop an understanding of spiritual, moral, ethical, social and cultural issues. For example:

- Gathering numerical information on "hot" topics within the media, and using the information to help inform opinions;
- Gathering information about dates and frequency of religious events and activities within the locality;
- Gathering information about clubs and societies in the areas to include dates, frequency, costs. Numerical information about local schools e.g. roll number, number of admissions, age range etc. to help inform choice

**Sustainable Development and Environmental Issues, Health and Safety considerations and European Developments consistent with international agreements**

These qualifications offer opportunities for learners to develop an understanding of sustainable development, environmental issues, health and safety and European developments consistent with international agreements. For example, gathering or presenting information, including numerical information on an environmental issue of relevance to the community in which the learners are located.

**Health and Safety**

A centre must have completed a full risk assessment of all areas of activity and identified potential risks. Where a risk exists, all practicable actions must be taken to eliminate or reduce this risk so that it is as low as possible.