Ascentis Level 1 Award in Mathematical Skills
Ascentis Level 1 Extended Award in Mathematical Skills

- Understanding Numbers
- Using Calculations: Addition and Subtraction of Whole Numbers
- Using Calculations: Multiplication and Division of Whole Numbers
- Understanding and Using Fraction
- Understanding and Using Decimals
- Understanding and Using Percentages
- Measure: Time and Temperature
- Understanding Length, Weight and Capacity
- Understanding Perimeter and Area
- Understanding Volume
- Understanding and Using 2D Shapes
- Handling Data
- Data Calculations
- Probability

Ascentis Level 1 Certificate in Mathematical Skills

Specification

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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www.ascentis.co.uk

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ASCENTIS LEVEL 1 AWARDS IN MATHEMATICAL SKILLS

Introduction

The Ascentis Level 1 Awards in Mathematical Skills and the Level 1 Certificate in Mathematical Skills are ideal qualifications for adults and young people wishing to develop their mathematical skills at Level 1. They are intended to aid progression, either to further study through Mathematics Functional Skills or GCSE Mathematics qualifications. The Ascentis Level 1 Awards in Mathematical Skills are a range of small qualifications which have been designed to 'bridge the gaps' 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 – 14 in total
- Relatively short qualifications of either 9 or 18 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 1 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 1 Award in Mathematical Skills - Understanding Numbers	600/7786/4
Ascentis Level 1 Award in Mathematical Skills - Using Calculations: Addition and Subtraction of Whole Numbers	600/7787/6
Ascentis Level 1 Award in Mathematical Skills - Using Calculations: Multiplication and Division of Whole Numbers	600/7788/8
Ascentis Level 1 Award in Mathematical Skills - Understanding and Using Fractions	600/7789/X
Ascentis Level 1 Award in Mathematical Skills - Understanding and Using Decimals	600/7790/6
Ascentis Level 1 Award in Mathematical Skills - Understanding and Using Percentages	600/7791/8
Ascentis Level 1 Award in Mathematical Skills - Measure: Time and Temperature	600/7901/0
Ascentis Level 1 Award in Mathematical Skills - Understanding Length, Weight and Capacity	600/7903/4
Ascentis Level 1 Award in Mathematical Skills - Understanding Perimeter and Area	600/7905/8
Ascentis Level 1 Award in Mathematical Skills - Understanding Volume	600/7915/0
Ascentis Level 1 Award in Mathematical Skills - Understanding and Using 2D Shapes	600/7904/6
Ascentis Level 1 Award in Mathematical Skills - Handling Data	600/7900/9
Ascentis Level 1 Award in Mathematical Skills - Data Calculations	600/7914/9
Ascentis Level 1 Award in Mathematical Skills - Probability	600/7902/2
Ascentis Level 1 Award in Mathematical Skills	601/3828/2
Ascentis Level 1 Extended Award in Mathematical Skills	601/3831/2
Ascentis Level 1 Certificate in Mathematical Skills	600/7916/2

Rationale for the Rules of Combination

Learners must complete one unit for each Award at Level 1. 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 1 Awards may wish to claim a Level 1 Certificate in Mathematical Skills.

Rules of Combination

Ascentis Level 1 Award in Mathematical Skills - Understanding Numbers				
Title	Level	Credit Value	GLH	Unit ref
Understanding Numbers	1	2	18	R/503/3166

Ascentis Level 1 Award in Mathematical Skills - Using Calculations: Addition and Subtraction of Whole Numbers				
Title	Level	Credit Value	GLH	Unit ref
Using Calculations: Addition and Subtraction of Whole Numbers	1	1	9	J/503/3259

Ascentis Level 1 Award in Mathematical Skills - Using Calculations: Multiplication and Division of Whole Numbers				
Title	Level	Credit Value	GLH	Unit ref
Using Calculations: Multiplication and Division of Whole Numbers	1	2	18	F/503/3356

Ascentis Level 1 Award in Mathematical Skills - Understanding and Using Fractions				
Title	Level	Credit Value	GLH	Unit ref
Understanding and Using Fractions	1	2	18	Y/503/3170

Ascentis Level 1 Award in Mathematical Skills - Understanding and Using Decimals				
Title	Level	Credit Value	GLH	Unit ref
Understanding and Using Decimals	1	2	18	R/503/3278

Ascentis Level 1 Award in Mathematical Skills - Understanding and Using Percentages				
Title	Level	Credit Value	GLH	Unit ref
Understanding and Using Percentages	1	2	18	D/503/3252

Ascentis Level 1 Award in Mathematical Skills - Measure: Time and Temperature				
Title	Level	Credit Value	GLH	Unit ref
Measure: Time and Temperature	1	2	18	D/505/4022

Ascentis Level 1 Award in Mathematical Skills - Understanding Length, Weight and Capacity				
Title	Level	Credit Value	GLH	Unit ref
Understanding Length, Weight and Capacity	1	1	9	L/503/3277

Ascentis Level 1 Award in Mathematical Skills - Understanding Perimeter and Area				
Title	Level	Credit Value	GLH	Unit ref
Understanding Perimeter and Area	1	1	9	J/503/3276

Ascentis Level 1 Award in Mathematical Skills - Understanding Volume				
Title	Level	Credit Value	GLH	Unit ref
Understanding Volume	1	1	9	F/503/3258

Ascentis Level 1 Award in Mathematical Skills - Understanding and Using 2D Shapes				
Title	Level	Credit Value	GLH	Unit ref
Understanding and Using 2D Shapes	1	1	9	H/503/3169

Ascentis Level 1 Award in Mathematical Skills - Handling Data				
Title	Level	Credit Value	GLH	Unit ref
Handling Data	1	2	18	A/503/3291

Ascentis Level 1 Award in Mathematical Skills - Data Calculations				
Title	Level	Credit Value	GLH	Unit ref
Data Calculations	1	1	9	K/503/3044

Ascentis Level 1 Award in Mathematical Skills - Probability				
Title	Level	Credit Value	GLH	Unit ref
Probability	1	1	9	Y/503/3282

Ascentis **Level 1 Award in Mathematical Skills**				
			Minimum credits: 3 Maximum credits: 5	
Title	Level	Credit Value	GLH	Unit ref
Understanding Numbers	1	2	18	R/503/3166
Using Calculations: Addition and Subtraction of Whole Numbers	1	1	9	J/503/3259
Using Calculations: Multiplication and Division of Whole Numbers	1	2	18	F/503/3356
Understanding and Using Fractions	1	2	18	Y/503/3170
Understanding and Using Decimals	1	2	18	R/503/3278
Understanding and Using Percentages	1	2	18	D/503/3252
Measure: Time and Temperature	1	2	18	D/505/4022
Understanding Length, Weight and Capacity	1	1	9	L/503/3277
Understanding Perimeter and Area	1	1	9	J/503/3276
Understanding Volume	1	1	9	F/503/3258
Understanding and Using 2D Shapes	1	1	9	H/503/3169
Handling Data	1	2	18	A/503/3291
Data Calculations	1	1	9	K/503/3044
Probability	1	1	9	Y/503/3282
Credits from equivalent Units: Please contact the Ascentis office to request equivalences, and ask to speak to a member of the Qualifications Development Team.				

Ascentis Level 1 Extended Award in Mathematical Skills				
			Minimum credits: 6 Maximum credits: 12	
Title	Level	Credit Value	GLH	Unit ref
Understanding Numbers	1	2	18	R/503/3166
Using Calculations: Addition and Subtraction of Whole Numbers	1	1	9	J/503/3259
Using Calculations: Multiplication and Division of Whole Numbers	1	2	18	F/503/3356
Understanding and Using Fractions	1	2	18	Y/503/3170
Understanding and Using Decimals	1	2	18	R/503/3278
Understanding and Using Percentages	1	2	18	D/503/3252
Measure: Time and Temperature	1	2	18	D/505/4022
Understanding Length, Weight and Capacity	1	1	9	L/503/3277
Understanding Perimeter and Area	1	1	9	J/503/3276
Understanding Volume	1	1	9	F/503/3258
Understanding and Using 2D Shapes	1	1	9	H/503/3169
Handling Data	1	2	18	A/503/3291

Data Calculations	1	1	9	K/503/3044
Probability	1	1	9	Y/503/3282
Credits from equivalent Units: Please contact the Ascentis office to request equivalences, and ask to speak to a member of the Qualifications Development Team.				

Ascentis Level 1 Certificate in Mathematical Skills				
				Credits: 13
Title	Level	Credit Value	GLH	Unit ref
Understanding Numbers	1	2	18	R/503/3166
Using Calculations: Addition and Subtraction of Whole Numbers	1	1	9	J/503/3259
Using Calculations: Multiplication and Division of Whole Numbers	1	2	18	F/503/3356
Understanding and Using Fractions	1	2	18	Y/503/3170
Understanding and Using Decimals	1	2	18	R/503/3278
Understanding and Using Percentages	1	2	18	D/503/3252
Measure: Time and Temperature	1	2	18	D/505/4022
Understanding Length, Weight and Capacity	1	1	9	L/503/3277
Understanding Perimeter and Area	1	1	9	J/503/3276
Understanding Volume	1	1	9	F/503/3258
Understanding and Using 2D Shapes	1	1	9	H/503/3169
Handling Data	1	2	18	A/503/3291
Data Calculations	1	1	9	K/503/3044
Probability	1	1	9	Y/503/3282
Credits from equivalent Units: 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 Entry Level 3 prior to starting to study these qualifications.

Recommended Guided Learning Hours

The recommended guided learning hours are –

Level 1 Award in Mathematical Skills - Understanding Numbers is 18
Level 1 Award in Mathematical Skills - Using Calculations: Addition and Subtraction of
Whole Numbers is 9
Level 1 Award in Mathematical Skills - Using Calculations: Multiplication and Division of
Whole Numbers is 18
Level 1 Award in Mathematical Skills - Understanding and Using Fractions is 18
Level 1 Award in Mathematical Skills - Understanding and Using Decimals is 18
Level 1 Award in Mathematical Skills - Understanding and Using Percentages is 18
Level 1 Award in Mathematical Skills - Measure: Time and Temperature is 18
Level 1 Award in Mathematical Skills - Understanding Length, Weight and Capacity is 9
Level 1 Award in Mathematical Skills - Understanding Perimeter and Area is 9
Level 1 Award in Mathematical Skills - Understanding Volume is 9
Level 1 Award in Mathematical Skills - Understanding and using 2D Shapes is 9

Level 1 Award in Mathematical Skills - Handling Data is 18
Level 1 Award in Mathematical Skills - Data Calculations is 9
Level 1 Award in Mathematical Skills - Probability is 9
Level 1 Award in Mathematical Skills is 27
Level 1 Extended Award in Mathematical Skills is 54
Level 1 Certificate in Mathematical Skills is 117

Total Qualification Time

The total qualification time is -

Level 1 Award in Mathematical Skills - Understanding Numbers is 18
Level 1 Award in Mathematical Skills - Using Calculations: Addition and Subtraction of Whole Numbers is 9
Level 1 Award in Mathematical Skills - Using Calculations: Multiplication and Division of Whole Numbers is 18
Level 1 Award in Mathematical Skills - Understanding and Using Fractions is 18
Level 1 Award in Mathematical Skills - Understanding and Using Decimals is 18
Level 1 Award in Mathematical Skills - Understanding and Using Percentages is 18
Level 1 Award in Mathematical Skills - Measure: Time and Temperature is 18
Level 1 Award in Mathematical Skills - Understanding Length, Weight and Capacity is 9
Level 1 Award in Mathematical Skills - Understanding Perimeter and Area is 9
Level 1 Award in Mathematical Skills - Understanding Volume is 9
Level 1 Award in Mathematical Skills - Understanding and using 2D Shapes is 9
Level 1 Award in Mathematical Skills - Handling Data is 18
Level 1 Award in Mathematical Skills - Data Calculations is 9
Level 1 Award in Mathematical Skills - Probability is 9
Level 1 Award in Mathematical Skills is 27
Level 1 Extended Award in Mathematical Skills is 54
Level 1 Certificate in Mathematical Skills is 117

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 1 or 2, Mathematics Awards 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 1 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

Credit Value of Unit 2   **GLH of Unit 18**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand numbers up to seven digits and identify negative numbers.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
N1/L1.1, N1/L1.2, N1/L1.8

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Be able to read whole numbers	1.1 Read whole numbers with up to seven digits in digit form
	1.2 Read names of whole numbers with up to seven digits
2 Be able to write whole numbers	2.1 Write whole numbers with up to seven digits in digit form
	2.2 Write names of whole numbers with up to seven digits
3 Be able to order whole numbers	3.1 Identify place value in whole numbers with up to seven digits
	3.2 Order whole numbers with up to seven digits in order of size
4 Understand the symbols for greater than and less than	4.1 Identify the symbols for greater than and less than
	4.2 Record the symbols for greater than and less than
5 Be able to round whole numbers	5.1 Round whole numbers with up to seven digits
6 Be able to recognise negative numbers in practical contexts	6.1 Identify the temperature at which water freezes
	6.2 Identify negative temperatures

UNIT SPECIFICATIONS

Using Calculations: Addition and Subtraction of Whole Numbers

Credit Value of Unit 1   **GLH of Unit 9**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to add and subtract whole numbers and check that answers are reasonable. This unit assumes that the learner has prior skills in using numbers at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding Numbers unit at Level 1 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/L1.3, N1/L1.8, N1/L1.9

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Be able to read whole numbers	1.1 Add whole numbers up to 7 digits, using written methods
	1.2 Add whole numbers up to 7 digits, using a calculator
	1.3 Select and use the correct operation for the context using a calculator
2 Be able to write whole numbers	2.1 Subtract whole numbers up to 7 digits, using written methods
	2.2 Subtract whole numbers up to 7 digits, using a calculator
	2.3 Select and use the correct operation for the context using a calculator
3 Be able to order whole numbers	3.1 Check answers using a different method
	3.2 Estimate answers by rounding numbers to nearest 10, 100 or 1000 to check that answers are reasonable

UNIT SPECIFICATIONS

Using Calculations: Multiplication and Division of Whole Numbers

Credit Value of Unit 2   **GLH of Unit 18**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to multiply and divide whole numbers and check that answers are reasonable. This unit assumes that the learner has prior skills in using numbers at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding Numbers unit at Level 1 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/L1.4, N1/L1.5, N1/L1.6, N1/L1.9

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Be able to multiply whole numbers.	1.1 Multiply whole numbers up to 4 digits by numbers up to 2 digits using written methods
	1.2 Multiply whole numbers up to 4 digits by numbers up to 2 digits using a calculator
	1.3 Select and use correct operation in context using a calculator
2 Be able to divide whole numbers.	2.1 Divide whole numbers up to 4 digits by numbers up to 2 digits using written methods and interpret remainders
	2.2 Divide whole numbers up to 7 digits by numbers up to 2 digits using a calculator and interpret remainders
	2.3 Identify division written in more than one format
	2.4 Select and use correct operation for the context using a calculator
3 Be able to check answers.	3.1 Check answers using a different method
	3.2 Estimate answers by rounding numbers to nearest 10,100 or 1000 to check that answers are reasonable
4 Understand the effect of multiplying whole numbers by 10 and 100.	4.1 Multiply whole numbers by 10
	4.2 Multiply whole numbers by 100
5 Understand the effect of dividing whole numbers by 10 and 100.	5.1 Divide whole numbers by 10
	5.2 Divide whole numbers by 100
6 Be able to recognise numerical relationships.	6.1 Recall multiplication facts up to 10 x 10
	6.2 Recall multiples of 10, 50, 100 and 1000
	6.3 Make connections between multiplication and division facts
	6.4 Use strategies for dealing with larger numbers

UNIT SPECIFICATIONS

Understanding and Using Fractions

Credit Value of Unit 2   **GLH of Unit 18**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand fractions and use simple ratios. This unit assumes that the learner has prior skills in using numbers at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding Numbers unit at Level 1 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/L1.7, N2/L1.1, N2/L1.2, N2/L1.3, N2/L1.11

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 read common fractions and mixed numbers	1.1 Read common mixed number names	
	1.2 Read common mixed numbers in digit form	
	1.3 Read common non-unit fractions	
2 Be able to write common fractions and mixed numbers	2.1 Write common mixed number names	
	2.2 Write common mixed numbers in digit form	
	2.3 Write common non-unit fractions	
3 Be able to order common fractions and mixed numbers	3.1 Arrange in order of size a set of common unit, non-unit fractions and mixed numbers	
4 Know common equivalent fractions	4.1 Identify and write common equivalent fractions	
5 Be able to find fractions of whole number quantities and measurements	5.1 Find a unit fraction by division	
	5.2 Find a non-unit fraction as a multiple of a unit fraction	
	5.3 Find a non-unit fraction by a combination of unit fractions	
	5.4 Use fractions in everyday situations	
6 Be able to use a calculator to solve problems involving fractions	6.1 Use a calculator to solve everyday problems involving fractions	
7 Understand ratio and direct proportion	7.1 Calculate quantities involved in mixtures using simple ratio	
	7.2 Use direct proportion to scale quantities up or down	

UNIT SPECIFICATIONS

Understanding and Using Decimals

Credit Value of Unit 2   **GLH of Unit 18**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand decimals and be able to calculate with them. This unit assumes that the learner has prior skills in using numbers at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding Numbers unit at Level 1 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/L1.9, N2/L1.4, N2/L1.5, N2/L1.6, N2/L1.7, N2/L1.11, MSS1/L1.1

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 read numbers with up to three decimal places	1.1 Read numbers with up to three decimal places
2 Be able to write numbers with up to three decimal places	2.1 Write numbers with up to three decimal places
3 Be able to order numbers with up to three decimal places	3.1 Arrange numbers with up to three decimal places
4 Understand that the position of a digit signifies its value	4.1 Identify place value in numbers with up to three decimal places
	4.2 Identify that the decimal point separates whole numbers from decimal fractions
5 Be able to approximate decimals by rounding to a whole number or 2 decimal places	5.1 Round numbers with up to three decimal places to the nearest whole numbers
	5.2 Round numbers with up to three decimal places to one decimal place
	5.3 Round numbers with up to three decimal places to two decimal places
6 Be able to add decimals up to 2 decimal places	6.1 Add decimals up to 2 decimal places
7 Be able to subtract decimals up to 2 decimal places	7.1 Subtract decimals up to 2 decimal places
8 Be able to multiply decimals up to 2 decimal places	8.1 Multiply decimal numbers by 10 and 100
	8.2 Multiply decimals up to 2 decimal places by whole numbers
9 Be able to divide decimals up to 2 decimal places	9.1 Divide decimal numbers by 10 and 100
	9.2 Divide decimals up to 2 decimal places by whole numbers
10 Know how to use strategies to check answers	10.1 Use different strategies to check answers
11 Be able to use a calculator to calculate decimals	11.1 Use a calculator to solve everyday problems using decimals

UNIT SPECIFICATIONS

Understanding and Using Percentages

Credit Value of Unit 2 **GLH of Unit 18** **Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand percentages. This unit assumes that the learner has prior skills in using fractions and decimals at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding and Using Fractions and the Understanding and Using Decimals units at Level 1 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/L1.8, N2/L1.9, N2/L1.10, N2/L1.11

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Understand whole number percentages	1.1 Read the percentage symbol
	1.2 Write the percentage symbol
	1.3 Identify 100% as the whole
	1.4 Identify 1% as one part of 100
2 Be able to calculate percentage parts of whole number quantities	2.1 Find 1% of a quantity
	2.2 Find 10% of a quantity, dividing by 10
	2.3 Find 5%, 20% of a quantity by different methods
	2.4 Find 50%, 25%, 75% of a quantity using combinations of division, multiplication, addition and subtraction
	2.5 Find any whole number % of a quantity
3 Understand how to calculate percentage increase	3.1 Find percentage increase
	3.2 Apply percentage increase to everyday examples
4 Understand how to calculate percentage decrease	4.1 Find percentage decrease
	4.2 Apply percentage decrease to everyday examples
5 Be able to use a calculator to calculate percentages	5.1 Calculate percentages using the % key on the calculator
	5.2 Use a calculator to solve everyday problems involving percentages

UNIT SPECIFICATIONS

Measure: Time and Temperature

Credit Value of Unit 2	**GLH of Unit 18**	**Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand times, dates and temperatures.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS1/L1.2, MSS1/L1.3, MSS1/L1.4

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

Learning Outcomes The learner will be able to		Assessment Criteria The learner can	
1	Understand times written in different formats	1.1	Read time from a 24-hour clock
		1.2	Record time in 24-hour notation
		1.3	Match 12-hour and 24-hour times
		1.4	Convert between 12-hour and 24-hour times
		1.5	Choose appropriate devices to measure different lengths of time
		1.6	Extract simple information from timetables
2	Understand dates written in different formats	2.1	Identify common date formats
		2.2	Use common date formats
		2.3	Use a calendar to calculate the length of time between given dates
3	Know the relationship between units of time	3.1	Identify uses of different units of time for activities and events
		3.2	Estimate in appropriate units the time different activities and events will take
4	Be able to calculate using time	4.1	Identify the relationships between units of time
		4.2	Convert between units of time
		4.3	Add hours and minutes
		4.4	Subtract hours and minutes
		4.5	Calculate durations of time
		4.6	Compare durations of time
5	Be able to read temperatures	5.1	Read thermometers in degrees Celsius
		5.2	Read thermometers in degrees Fahrenheit
		5.3	Identify freezing point as 0˚C and 32˚F
6	Be able to compare temperatures	6.1	Compare temperatures in degrees Celsius and degrees Fahrenheit
7	Be able to measure temperature	7.1	Estimate and measure temperature in everyday situations

UNIT SPECIFICATIONS

Understanding Length, Weight and Capacity

Credit Value of Unit 1	**GLH of Unit 9**	**Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand measures of length, weight and capacity.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS1/L1.5, MSS1/L1.6, MSS1/L1.7

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Understand metric units of measurement	1.1 Identify metric units of length, weight and capacity including their abbreviations
	1.2 Convert measurements of length, weight and capacity from one metric unit to another
	1.3 Add units of measure within the same system in practical situations
	1.4 Subtract units of measure within the same system in practical situations
2 Be able to use units for measurement	2.1 Choose units of measurement for different measuring tasks
3 Be able to use instruments for measurement	3.1 Choose measuring instruments for different measuring tasks
4 Understand the symbols for greater than and less than	4.1 Identify the symbols for greater than and less than

UNIT SPECIFICATIONS

Understanding Perimeter and Area

Credit Value of Unit 1   **GLH of Unit 9**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to find the perimeters and areas of shapes. This unit assumes that the learner has prior skills in understanding length, weight and capacity at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding Length, Weight and Capacity unit at Level 1 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in understanding length, weight and capacity through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS1/L1.8, MSS1/L1.9

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 Understand the perimeters of shapes	1.1 Identify perimeter as being measured in units of length
	1.2 Produce different squares and rectangles with the same perimeter
2 Be able to find the perimeter of shapes	2.1 Find the perimeters of shapes in different ways
	2.2 Find a formula in words for calculating the perimeter of rectangular shapes
	2.3 Check the formula
	2.4 Find the perimeters of rectangular shapes using a formula
3 Be able to read and record measurement of an area	3.1 Read and write the units of measure for the area, in words and in other ways
	3.2 Identify measurements used to calculate the area
4 Be able to find the areas of rectangles	4.1 Identify that area is measured in square units
	4.2 Find the area of drawings on squared paper by counting squares
	4.3 Find the areas of rectangular shapes identifying and using the formula

UNIT SPECIFICATIONS

Understanding Volume

Credit Value of Unit 1   **GLH of Unit 9**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand how to find volumes. This unit assumes that the learner has prior skills in understanding length, weight and capacity at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding Length, Weight and Capacity unit at Level 1 or equivalent units. Alternatively the learner may be asked to demonstrate the skills in understanding length, weight and capacity through an initial assessment.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS1/L1.10

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 Understand how volume is measured	1.1 Identify that volume is a measure of space
	1.2 Identify volume is measured in cubic units
	1.3 Read and record units of measure of volume
2 Know how to find the volume of cuboid shapes	2.1 Use practical methods to find the volume of a cuboid container
	2.2 Identify the dimensions of a cuboid to calculate volume
	2.3 Use the formula to calculate the volume of a cuboid

UNIT SPECIFICATIONS

Understanding and Using 2D Shapes

Credit Value of Unit 1　　　　　　**GLH of Unit 9**　　　　　　**Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand the properties of shapes and measure angles.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
MSS2/L1.1, MSS2/L1.2

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1　　Understand the properties of 2D shapes	1.1　Use vocabulary related to shape
	1.2　Identify a right angle
	1.3　Identify two right angles
	1.4　Identify four right angles
	1.5　Identify the properties of the sides and angles of 2D shapes
	1.6　Identify a line of symmetry
2　　Be able to use the properties of 2D shapes to solve problems	2.1　Identify which regular shapes tessellate
	2.2　Plan a tiling pattern.
	2.3　Produce 2D shapes in different orientations using grids
3　　Be able to read and record angles in degrees	3.1　Read and record angles using the symbol for degrees
4　　Be able to measure and record angles in degrees	4.1　Measure and record a variety of angles using a protractor

UNIT SPECIFICATIONS

Handling Data

Credit Value of Unit 2   **GLH of Unit 18**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to extract, interpret and represent information from data.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
HD1/L1.1, HD1/L1.2

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Be able to extract information from data	1.1 Extract information from tables
	1.2 Extract information from line graphs
	1.3 Extract information from pie charts
2 Be able to interpret information from data	2.1 Interpret information from tables
	2.2 Interpret information from line graphs
	2.3 Interpret information from pie charts
	2.4 Interpret diagrams in practical contexts
	2.5 Interpret scale drawings using a simple scale
3 Be able to represent discrete data	3.1 Implement methods for collecting data
	3.2 Represent data collected in suitable ways
	3.3 Organise given data sets in suitable ways
	3.4 Represent given data sets in suitable ways

UNIT SPECIFICATIONS

Data Calculations

| **Credit Value of Unit 1** | **GLH of Unit 9** | **Level of Unit 1** |

Introduction

This unit will give learners an opportunity to calculate arithmetical averages and the range of a set of data.

This unit maps to the Adult Numeracy Core Curriculum in the following areas:
HD1/L1.3, HD1/L1.4

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Understand the arithmetical average for a set of data	1.1 Use the term average in everyday contexts
	1.2 Find the mean for a given set of data
2 Understand the range of a set of data	2.1 Use the term range as a measure of spread for sets of data in everyday usage
	2.2 Calculate the range of given data sets

UNIT SPECIFICATIONS

Probability

Credit Value of Unit 1   **GLH of Unit 9**   **Level of Unit 1**

Introduction

This unit will give learners an opportunity to understand and calculate probability. This unit assumes that the learner has prior skills in using decimals and percentages at Level 1. These skills may have been gained through the achievement of the Ascentis Understanding and Using Decimals and the Understanding and Using Percentages units at Level 1 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/L1.1, HD2/L1.2

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

Learning Outcomes The learner will be able to	Assessment Criteria The learner can
1 Understand probability as an expression of an event occurring	1.1 Identify what is meant by expressions such as one in two chance, fifty fifty
2 Understand that probability can be written as a fraction, decimal or percentage	2.1 Express the probability of events occurring as decimals and percentages
	2.2 Express the probability of an event as the number of ways the event can happen divided by the total number of outcomes
3 Be able to calculate probability	3.1 Use real data to calculate probabilities
	3.2 Use simulated data to calculate probabilities

Summary Record of Achievement

Level 1 Award/Extended Award/Certificate in Mathematical Skills

Learner Name _____

Unit Title	Level	Credit Value	Date completed	Assessor Signature	Internal Verifier Signature (if sampled)
Understanding Numbers	1	2			
Using Calculations: Addition and Subtraction of Whole Numbers	1	1			
Using Calculations: Multiplication and Division of Whole Numbers	1	2			
Understanding and Using Fractions	1	2			
Understanding and Using Decimals	1	2			
Understanding and Using Percentages	1	2			
Measure: Time and Temperature	1	2			
Understanding Length, Weight and Capacity	1	1			
Understanding Perimeter and Area	1	1			
Understanding Volume	1	1			
Understanding and Using 2D Shapes	1	1			
Handling Data	1	2			
Data Calculations	1	1			
Probability	1	1			

Minimum Credit Value of Qualification _____

Assessor Signature _____

Internal Verifier Signature (if sampled) _____

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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 1

Skill Standards	Coverage and range (indicative)
Representing ▪ Understand practical problems in familiar and unfamiliar contexts and situations, some of which are non-routine ▪ Identify and obtain necessary information to tackle the problem ▪ Select mathematics in an organised war to find solutions **Assessment weighting 30 - 40%** **Analysing** ▪ Apply mathematics in an organised way to find solutions to straightforward practical problems for different purposes ▪ Use appropriate checking procedures at each stage **Assessment weighting 30 - 40%** **Interpreting** ▪ Interpret and communicate solutions to practical problems, drawing simple conclusions and giving explanations **Assessment weighting 30 - 40%**	▪ Understand and use whole numbers and understand negative numbers in practical contexts ▪ Add, subtract, multiply and divide whole number using a range of strategies ▪ Understand and use equivalences between common fractions, decimals and percentages ▪ Add and subtract decimals up to two decimal places ▪ Solve simple problems involving ration where one number is a multiple of another ▪ Use simple formulae expressed in words for one- or two- step operations ▪ Solve problems requiring calculation, with common measures, including money, time, length, weight, capacity and temperature ▪ Convert units of measure in the same system ▪ Work out areas and perimeters in practical situations ▪ Construct geometric diagrams, models and shapes ▪ Extract and interpret information from tables, diagrams, charts and graphs ▪ Collect and record discrete data and organise and represent information in different ways ▪ Find mean and range ▪ Use data to assess the likelihood of an outcome
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