

Numeracy

SCQF: level 5 (6 SCQF credit points)

Unit code: H225 75

Unit outline

The general aim of this Unit is to develop learners' numerical and information handling skills to solve real-life problems involving number, money, time and measurement. At this level, real-life problems will have some complex features and be set in contexts which are likely to be unfamiliar to the learner. As learners tackle real-life problems, they will decide what numeracy and information handling skills to use, and how to apply those skills to an appropriate level of accuracy. Learners will also interpret graphical data and use their knowledge and understanding of probability to identify solutions to solve real-life problems involving money, time and measurement. Learners will use their solutions to make and justify decisions.

Learners who complete this Unit will be able to:

- 1 Use numerical skills to solve real-life problems involving money/time/measurement
- 2 Interpret graphical data and situations involving probability to solve real-life problems involving money/time/measurement

This Unit is available as a free-standing Unit. The Unit Specification should be read in conjunction with the *Unit Support Notes*, which provide advice and guidance on delivery, assessment approaches and development of skills for learning, skills for life and skills for work. Exemplification of the standards in this Unit is given *in Unit Assessment Support*.

Recommended entry

Entry to this Unit is at the discretion of the centre. However, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualification and/or experience:

- ◆ National 4 Lifeskills Mathematics Course or its component Units
- ◆ National 4 Mathematics Course or its component Units
- ◆ Numeracy (National 4) Unit
- ◆ Core Skills Numeracy (SCQF level 4)

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skill for the Unit:

Numeracy at SCQF level 5

Equality and inclusion

This Unit Specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. For further information, please refer to the *Unit Support Notes*.

Standards

Outcomes and assessment standards

Outcome 1

The learner will:

- 1 Use numerical skills to solve real-life problems involving money/time/measurement by:**
 - 1.1 Selecting and using appropriate numerical notation and units
 - 1.2 Selecting and carrying out calculations
 - 1.3 Recording measurements using a scale on an instrument
 - 1.4 Interpreting measurements and results of calculations to make decisions
 - 1.5 Justifying decisions using the results of measurements or calculations

Outcome 2

The learner will:

- 2 Interpret graphical data and situations involving probability to solve real-life problems involving money/time/measurement by:**
 - 2.1 Extracting and interpreting data from at least three different graphical forms
 - 2.2 Making and justifying decisions using evidence from the interpretation of data
 - 2.3 Making and justifying decisions based on probability

Evidence Requirements for the Unit

Assessors should use their professional judgement, subject knowledge and experience, and understanding of their learners, to determine the most appropriate ways to generate evidence and the conditions and contexts in which they are used. They should ensure that there is sufficient evidence of competence in the use of numerical skills, and in the interpretation of data and situations involving probability from the Outcomes and Assessment Standards to allow a judgement to be made that the learner has achieved the Unit.

Assessors should use their professional judgement to give learners credit for an appropriate degree of accuracy. This may mean giving credit for incomplete or numerically incorrect solutions which show correct methodology, therefore demonstrating required knowledge and understanding of the numerical and information handling processes involved.

Evidence for the Outcomes must include tasks which draw from the contexts of money, time and measurement.

For Outcome 1, real-life problems must:

- ◆ use contexts likely to be new to the learner, ie non-routine or not experienced as part of teaching and learning
- ◆ be given to the learner with relevant supporting materials to assist the learner interpret the problem
- ◆ provide opportunities for calculations involving: whole numbers, fractions, decimal fractions, percentages, a simple formula, ratio and direct or indirect proportion.

Collectively these calculations require evidence of all of the following: addition, subtraction, multiplication and division

- ◆ allow the use of appropriate resources such as a calculator or other technologies where they would normally be available in the real-life situations in which the calculation is being carried out

For Outcome 2, graphical forms could include:

- ◆ a table with at least five categories of information
- ◆ a chart such as a comparative or compound bar chart, a bar chart with a misleading scale or pie chart without values
- ◆ a graph such as a conversion line graph, a comparative line graph or a line graph where part of the axis is omitted or the scale is misleading
- ◆ a diagram such as scatter diagram, back-to-back stem and leaf or a map

There are many ways in which the evidence for the Unit can be generated. Evidence may be gathered using different assessments and more than one context for each Outcome; or it may be gathered for the Unit as a whole through one assessment and a single context. If the latter approach is used, it must be clear how the evidence covers each Outcome.

Exemplification of assessment is provided in *Unit Assessment Support*. Advice and guidance on possible approaches to assessment is provided in the *Unit Support Notes*.

Development of skills for learning, skills for life and skills for work

The SQA *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* contains generic numeracy skills. The *Numeracy* (SCQF level 5) Unit is derived from this framework and learners will cover all the main numeracy skills. The main numeracy skills are as follows:

2 Numeracy

- 2.1 Number processes
- 2.2 Money, time and measurement
- 2.3 Information handling

It is expected that learners will also develop broad, generic skills through this Unit. The skills that learners will be expected to improve and develop through the Unit are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and drawn from the main skills areas listed below. These must be built into the Unit where there are appropriate opportunities.

5 Thinking skills

- 5.3 Applying
- 5.4 Analysing and evaluating

Amplification of these is given in SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work*. The level of these skills should be at the same SCQF level of the Unit and be consistent with the SCQF level descriptor. Further information on building in skills for learning, skills for life and skills for work is given in the Unit Support Notes.

Numeracy skills shown in this Unit provide automatic certification of the Core Skill:
Numeracy at SCQF level 5

Administrative information

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Superclass: RB

History of changes to National Unit Specification

Version	Description of change	Authorised by	Date

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