

N5

National 5
Course Assessment
Specification



National 5 Lifeskills Mathematics Course Assessment Specification (C744 75)

Valid from August 2013

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Please refer to the note of changes at the end of this Course Assessment Specification for details of changes from previous version (where applicable).

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Course outline

Course title: National 5 Lifeskills Mathematics

SCQF level: 5 (24 SCQF credit points)

Course code: C744 75

Course assessment code: X744 75

The purpose of the Course Assessment Specification is to ensure consistent and transparent assessment year on year. It describes the structure of the Course assessment and the mandatory skills, knowledge and understanding that will be assessed.

Course assessment structure

Component 1 — question paper: Paper 1 (non-calculator)	35 marks
Component 2 — question paper: Paper 2 (case studies)	55 marks
Total marks	90 marks

This Course includes six SCQF credit points to allow additional time for preparation for Course assessment. The Course assessment covers the added value of the Course.

Equality and inclusion

This Course Assessment Specification has been designed to ensure that there are no unnecessary barriers to assessment. Assessments have been designed to promote equal opportunities while maintaining the integrity of the qualification.

For guidance on assessment arrangements for disabled learners and/or those with additional support needs, please follow the link to the Assessment Arrangements web page: www.sqa.org.uk/sqa/14977.html.

Guidance on inclusive approaches to delivery and assessment of this Course is provided in the *Course Support Notes*.

Assessment

To gain the award of the Course, the learner must pass all of the Units as well as the Course assessment. Course assessment will provide the basis for grading attainment in the Course award.

Course assessment

SQA will produce and give instructions for the production and conduct of Course assessments based on the information provided in this document.

Added value

The purpose of the Course assessment is to assess added value of the Course as well as confirming attainment in the Course and providing a grade. The added value for the Course will address the key purposes and aims of the Course, as defined in the Course rationale. It will do this by addressing one or more of breadth, challenge, or application.

In this Course assessment, added value will focus on the following:

- ◆ breadth — drawing on knowledge and skills from across the Course
- ◆ challenge — requiring greater depth or extension of knowledge and/or skills
- ◆ application — requiring application of knowledge and/or skills in practical or theoretical contexts as appropriate

This added value consists of drawing on, applying and extending learners' skills, knowledge and understanding by:

- ◆ analysing and interpreting real-life situations and problems involving mathematics in new and previously unseen situations
- ◆ selecting and integrating mathematical operational skills from across the Course to tackle real-life situations or problems
- ◆ applying a range of mathematical operational skills to an appropriate degree of accuracy with and without the aid of a calculator
- ◆ using mathematical reasoning skills to draw conclusions or justify decisions
- ◆ communicating mathematical information appropriately

There are two question papers requiring learners to demonstrate aspects of breadth, challenge and application in real-life contexts. In one of the question papers the use of a calculator will be permitted. Learners will apply breadth and depth of knowledge and skills from across the Units to answer appropriately challenging questions.

Grading

Course assessment will provide the basis for grading attainment in the Course award.

The Course assessment is graded A–D. The grade is determined on the basis of the total mark.

A learner's overall grade will be determined by their performance across the Course assessment.

Grade description for C

For the award of Grade C, learners will have demonstrated successful performance in all of the Units of the Course. In the Course assessment, learners will typically have demonstrated successful performance in relation to the mandatory skills, knowledge and understanding for the Course.

Grade description for A

For the award of Grade A, learners will have demonstrated successful performance in all of the Units of the Course. In the Course assessment, learners will typically have demonstrated a consistently high level of performance in relation to the mandatory skills, knowledge and understanding for the Course.

Credit

To take account of the extended range of learning and teaching approaches, remediation, consolidation of learning and integration needed for preparation for external assessment, six SCQF credit points are available in Courses at National 5 and Higher, and eight SCQF credit points in Courses at Advanced Higher. These points will be awarded when a grade D or better is achieved.

Structure and coverage of the Course assessment

The Course assessment will consist of two Components: a question paper titled Paper 1 (non-calculator), and a question paper titled Paper 2 (case studies).

Component 1 — question paper: Paper 1 (non-calculator)

The purpose of this question paper is to allow learners to demonstrate breadth and application of mathematical skills, knowledge and understanding retained from across the Course.

This question paper will give learners an opportunity to demonstrate, without the aid of a calculator, an understanding of a range of mathematical skills and to select, apply and combine them to perform calculations in real-life contexts. Learners will also have opportunities to demonstrate skills in interpreting and presenting information.

Paper 1 (non-calculator) will have 35 marks out of a total of 90 marks.

The question paper will consist of short-answer and extended response questions and will draw on the skills, knowledge and understanding specified in the ‘Further mandatory information on Course coverage’ section at the end of this *Course Assessment Specification*.

Component 2 —question paper: Paper 2 (case studies)

The purpose of this question paper is to allow learners to demonstrate the application of mathematical skills, knowledge and understanding from across the Course through the use of case studies. A calculator may be used.

This question paper will give learners an opportunity to interpret and analyse real-life problems or situations, select appropriate strategies, carry out calculations and draw valid conclusions or justify decisions.

Paper 2 (case studies) will have 55 marks out of a total of 90 marks.

This question paper will consist of short-answer and extended response questions and will draw on the skills, knowledge and understanding specified in the ‘Further mandatory information on Course coverage’ section at the end of this *Course Assessment Specification*.

For more information about the structure and coverage of the Course assessment, refer to the [Question Paper Brief](#).

Setting, conducting and marking of assessment

Question paper: Paper 1 (non-calculator)

This question paper will be set and marked by SQA, and conducted in centres under conditions specified for external examinations by SQA.

Learners will complete this in 50 minutes.

Question paper: Paper 2 (case studies)

This question paper will be set and marked by SQA, and conducted in centres under conditions specified for external examinations by SQA.

Learners will complete this in 1 hour and 40 minutes (including time to read and absorb case study information).

Further mandatory information on Course coverage

The following gives details of mandatory skills, knowledge and understanding for the National 5 Lifeskills Mathematics Course. Course assessment will involve sampling the skills, knowledge and understanding. This list of skills, knowledge and understanding also provides the basis for the assessment of Units of the Course.

Selection and application of the following as appropriate:

The learner will use reasoning skills and financial skills linked to real-life contexts	
Skills	Explanation
Analysing a financial position using budget information	Budgeting and planning for personal use or planning an event. Balancing incomings and outgoings from a range of sources.
Analysing and interpreting factors affecting income	Investigate and interpret income and deductions for different personal circumstances and career choices. These should include: <ul style="list-style-type: none">◆ basic pay, gross/net pay◆ overtime◆ incentive payments eg bonus and commission◆ benefits and allowances◆ National Insurance◆ income tax◆ pension contributions
Determining the best deal, given three pieces of information	Compare at least three products, given three pieces of information on each.
Converting between several currencies	Convert between currencies in either direction; this is to involve the use of at least three currencies in a multi-stage task.
Investigating the impact of interest rates on savings and borrowing	These include: <ul style="list-style-type: none">◆ loans◆ savings◆ credit cards◆ store cards◆ credit agreements

The learner will use reasoning skills and statistical skills linked to real-life contexts	
Skills	Explanation
Using a combination of statistics to investigate risk and its impact on life	This aims to develop the link between simple probability and expected frequency.
Using a combination of statistical information presented in different diagrams	

Using statistics to analyse and compare data sets	Constructing, interpreting and comparing boxplots, scatter graphs and constructing a pie chart. Calculating mean, median, range, inter-quartile range, and standard deviation.
Drawing a line of best fit from given data	In tabular form.

The learner will use reasoning skills and measurement skills linked to real-life contexts	
Skills	Explanation
Calculating a quantity based on two related pieces of information	
Constructing a scale drawing, including choosing a scale	From verbal information and/or sketch
Planning a navigation course	By using a given map or plan using bearings and length
Carrying out efficient container packing	By assigning items to uniform containers to minimise the amount of containers used
Using precedence tables to plan tasks	Some activities can be done simultaneously whereas others must be done in sequence
Solving a problem involving time management	Solving a problem in time management by planning timing of activities with some complex features including working across time zones
Considering the effects of tolerance	Given the tolerance, calculate the limits. Given the accuracy of the methods of production of two fitting components, consider the implications for compatibility. Include the use of millimetres.

The learner will use reasoning skills and geometric skills linked to real-life contexts	
Skills	Explanation
Investigating a situation involving gradient	Using vertical over horizontal distance, including coordinates
Solving a problem involving a composite shape which includes part of a circle	
Solving a problem involving the volume of a composite solid	Including simple fractional parts of solids
Using Pythagoras' theorem within a two-stage calculation	

The learner will use numerical skills to solve real-life problems involving money/time/measurement

Skills	Explanation
Selecting and using appropriate numerical notation and units	<p>Including: =, +, -, x, /, ÷, <, >, (), %, colon and decimal point and simple formulae.</p> <p>Selecting and using appropriate units for money, time and measurement (length, weight, volume and temperature).</p>
Selecting and carrying out calculations	<ul style="list-style-type: none"> ◆ add and subtract numbers given to two decimal places ◆ multiply or divide a number given to two decimal places by a single-digit whole number ◆ multiply or divide a number given to two decimal places by multiples of 10, 100 and 1000 ◆ round answers to the nearest significant figure or three decimal places ◆ find percentages and fractions of shapes and quantities ◆ recognise and use mixed fractions, eg $3\frac{1}{2}$, $\frac{1}{3}$, $4\frac{1}{4}$, $1/8$, $2/6$ ◆ add and subtract simple fractions, eg $\frac{1}{2} + \frac{1}{4}$ and $\frac{2}{3} - \frac{1}{3}$ ◆ find the number of fractional parts in a mixed number, eg $2\frac{1}{2} = 5$ halves ◆ calculate compound percentage increase and decrease ◆ express a quantity as a percentage of another quantity ◆ convert equivalences between fractions, decimals and percentages ◆ calculate speed, time and distance ◆ calculate volume (cylinder, triangular prism), area (triangles and composite shapes) and perimeter (circumference) ◆ calculate ratio including dimensions from scale drawings, eg scale of 1:10 ◆ calculate direct and indirect proportion
Recording measurements using a scale on an instrument	To the nearest marked, minor unnumbered division on an instrument for length, angle, weight, volume and temperature.
Interpreting measurements and the results of calculations to make decisions	Identifying relevant measurements and results of calculations to make a decision.
Justifying decisions by using the results of measurements and calculations	Using evidence from the results of calculations to justify decisions.

The learner will interpret graphical data and situations involving probability to solve real-life problems involving money/time/measurement

Skills	Explanation
Extracting and interpretation data from at least three different graphical forms	<ul style="list-style-type: none"> ◆ a table with at least five categories of information ◆ a chart where all the values are not given or where the scale is not obvious, eg comparative/compound bar chart ◆ a graph where part of the axis is missing or the scale is not obvious, eg conversion line graph ◆ a diagram, eg stem and leaf, scatter diagram or a map
Making and justifying decisions using evidence from the interpretation of data	<ul style="list-style-type: none"> ◆ make decisions based on patterns, trends or relationships in data ◆ use evidence from the interpretation of data to justify decisions ◆ understand the effects of bias and sample size
Making and justifying decisions based on probability	<ul style="list-style-type: none"> ◆ recognise patterns, trends and relationships and use these to state the probability of an event happening ◆ use evidence from the interpretation of probability to justify decisions ◆ analyse the probability of combined events, identifying the effects of bias and describing probability through the use of percentages, decimals, fractions and ratio to make and justify decisions

Administrative information

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History of changes to Course Assessment Specification

Version	Description of change	Authorised by	Date
1.1	Further information and clarification on scope and structure of the question papers in the 'Structure and coverage of Course assessment' section; minor amendment to 'Grading' section; addition of word 'angle' on page 9.	Qualifications Development Manager	June 2013
1.2	Page 5: 'Structure and coverage of the Course assessment' section — reference to the Question Paper Brief added.	Qualifications Manager	April 2016

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