



# **FUNCTIONAL SKILLS SPECIFICATION FOR MATHEMATICS LEVELS 1&2**

Version: September 2011

## Structure

These externally-assessed, single component Functional Skills qualifications will assess three interrelated process skills:

- Representing
- Analysing
- Interpreting

## Sampling and Range

Each of the three process skills will be given roughly equal weighting (between 30% and 40% each) within an assessment. In addition, a minimum of 75% of the marks within each assessment will be allocated to open-response questions.

Each assessment will sample at least 75% of the coverage and range items listed in the specification and all coverage and range items will be sampled at least once across each series of four assessment windows.

## Assessment Design

Assessment will:

- be 100% external assessment
- focus on functionality and the effective application of process skills in purposeful contexts and scenarios that reflect real-life situations.
- have a minimum of 75 per cent open response assessment.
- conform to the assessment weightings outlined in the skills standards.
- provide opportunities to demonstrate each of the process skills and span a sufficient selection of the skills sub-sections, within the specified ranges stated in the skills standards. The balance may vary between individual assessment tasks.
- cover all of the skills standards.
- require candidates to demonstrate their ability to represent, analyse and interpret, using number (including algebra at level 2), geometry and statistics within functional contexts.
- clearly indicate how marks are allocated for each of the process skills (Representing; Analysing; Interpreting).

## Assessment Duration

Minimum of one and a half hours and a maximum of two hours.

## Level 1

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

## Level 2

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