



## Key skills test

### Application of number

#### Level 4

#### Test specification

---

### Introduction

- 1 The application of number key skill qualification will be awarded to candidates who are able to demonstrate that their attainment meets national standards in application of number in both their portfolio of evidence and an external assessment (hereafter referred to as a test).
- 2 The test provides external assessment for each level. The test is externally set and marked. The purpose of the test is to assess the candidate's knowledge and understanding of the content of the qualification and ability to synthesise the skills needed to apply this in a range of contexts.
- 3 Performance in the test is used to complement and support performance in the internal assessment component, the portfolio of evidence. The portfolio must contain evidence of the candidate's purposeful and effective application of the specified skills, knowledge and understanding which meets the full requirements of part B of the key skill qualification specification. The portfolio evidence is internally set, internally assessed and externally moderated/verified. A candidate must satisfy the requirements of both components to be awarded the key skill.
- 4 The purpose of this test specification is to inform the development of tests for the application of number key skill at level 4 by clarifying those aspects of the qualification, which may be tested.
- 5 This test specification is intended to provide writers, editors and reviewers, and also teachers and candidates, with detailed information about the acceptable content, coverage and demand for questions, together with the range of suitable for contexts for questions at level 4.
- 6 This test specification should be read in conjunction with:
  - *Application of number level 4 qualification* (QCA, CCEA, ACCAC, 2004)
  - *Guidance on the key skills* (QCA, CCEA, ACCAC, 2004).
- 7 This test specification has been designed to support the development and production of tests in English, Welsh and Gaeilge.

## Design of tests

### Principles

- 8 In creating tests, writers must take the following into account:
- the test will last for 2 hours and 30 minutes
  - the test will consist of six questions worth a total of 50 marks
  - candidates will be supervised while taking the test
  - candidates may use writing, drawing and measuring equipment and scientific or graphic calculators
  - candidates may not use calculators which incorporate computer algebra software.
- 9 The test specification is complemented by awarding body instructions to centres on the conduct of tests, and guidance on arrangements for candidates with special requirements.

### Scope and demand of tests

- 10 The test must match the identified requirements of the application of number qualification specification at level 4. This means that the test will draw on the underpinning skills of part A, 'You need to know how to', by focusing on specific aspects of part B of the key skill specification, 'You must'. For the purpose of this test specification, the requirements are organised into skill areas (see below).

### Intended pass marks

- 11 The test will be designed to have a pass mark in the range 25–35 marks out of 50. Responsibility for setting the final pass mark resides with the awarding bodies acting jointly.

### Structure of tests and form of questions

- 12 All the questions in the test will be set in a context and relate to substantial and complex subjects. The source material may include a large data set, tables, graphs, charts, diagrams and pre-grouped data. It will also include enough information to allow results to be presented via a table, graph, chart or diagram if this is appropriate.
- 13 The test will contain a number of discrete questions, which will typically include some modelling and will not consist solely of calculations. The questions may include:
- identifying and correcting errors
  - de-bugging solutions
  - identifying and correcting inappropriate procedures
  - describing circumstances where one technique rather than others could be used to advantage (for example using non-linear scales in charts or graphs)
  - explaining the meaning of particular terms or expressions and their relevance to a topic or task
  - explaining a concept by providing examples.
- 14 There will be at least one question which will require the candidate to focus on mathematical processes. Candidates may be required to use their practical experience of selection and application to inform their responses. The questions may include:
- 'what if' scenarios
  - justification of the selection of mathematical techniques used, including why techniques were rejected
  - what decisions were made and why
  - what evidence or skills were used to inform decisions

- evaluation of decisions in the light of outcomes
- critical reflection on their mathematical work.

15 All questions must avoid making demands on candidates beyond the scope of the application of number skills being assessed. In particular, all language used in the questions and source materials must be clear and direct. Expectations of knowledge or familiarity with specialist contexts, concepts and terms beyond those associated with the application of number topics in this specification must be avoided.

### **About scenarios**

16 The tested components of the application of number key skill are concerned with evaluating information from different sources, carrying out calculations, interpreting results and presenting findings. Examples of scenarios which provide opportunities to develop suitable questions include:

- travel, for example journeys by car or public transport, holidays away from home
- leisure activities, for example hobbies, sports, clubs, TV, cinema, music, theatre
- employment, for example job roles, organisations, pay rates, income
- domestic activities, everyday life, for example cooking, shopping, DIY
- personal items, for example health, social security, social activities, address books
- goods, for example food, clothing, toys, furniture, audio-video equipment, cars
- climate and weather, for example rainfall, hours of sun, temperatures, forecasts
- public records, for example library catalogues, electoral registers, census data, DVLA records
- standard documents, for example invoices, order forms, bank statements
- production, for example products, materials, suppliers, overheads, drawings, labour
- services, for example house agents, banks, mail order, education, health
- social issues.

17 Every effort must be made to ensure that source material is free of any form of bias (for example gender, ethnic, age) that might favour or disadvantage any candidate or group of candidates.

## Skill areas and mark allocations

### Mark allocations

The table shows mark allocation against the skill area headings

Skill area 1	Developing a strategy	5 marks
Skill area 2	Monitoring progress and carrying out calculations	30 marks
Skill area 3	Evaluating strategy and presenting outcomes	15 marks
<b>Total</b>		<b>50 marks</b>

Marks should be allocated in such a way that an appropriate approximately even balance of marks results.

Tests should continue to apply the emphases that have been used in previous tests.

### Skill area 1 – Developing a strategy

This skill area covers the following skills in part B (N4.1)

- identify relevant sources and research the information needed for planning purposes
- plan the use of application of number skills, and make a reasoned selection of methods for achieving the quality of outcomes required

### Skill area 2 – Monitoring progress and carrying out calculations

This skill area covers the following skills in part B (N4.2)

- evaluate information from different sources, developing alternative lines of enquiry where appropriate
- carry out calculations to appropriate levels of accuracy, drawing on a range of techniques to suit the purpose

### Skill area 3 – Evaluating strategy and presenting outcomes

This skill area covers the following skills in part B (N4.3)

- interpret results and identify the main findings, including evidence to support the conclusions
- present information effectively, selecting appropriate methods to clearly illustrate findings, and explain results in relation to the hypotheses
- assess the effectiveness of the strategy used, including factors that had an impact on the outcomes

### Marking

The mark scheme for each test should provide sufficient detail and clear guidance for markers to enable them to mark consistently and accurately. The mark scheme should be developed following pre-testing, taking account of responses made by candidates.