

Extract from Specification

Essential Skills Wales

Edexcel Level 1 Essential Skills Wales in Application of Number

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Level 1 Essential Skills Wales in Application of Number

Level:	1
Credit value:	6
Guided learning hours:	60

About this qualification

This is about demonstrating your skills in:

- understanding numerical data (N1.1)
- carrying out calculations (N1.2)
- interpreting results and presenting findings (N1.3)

in order to tackle problems or tasks that you meet in education, training, work and social roles.

Amplification of evidence requirements

Notes

- 1 Each level of the skill incorporates and builds on the previous levels. So, for example, in N1.2.2, the requirement to 'recall multiplication facts to 10 x 10 and make connections with division facts' builds on 'recall addition and subtraction facts to 20' (Entry Level 3).
- 2 The subject matter and resources will be straightforward, (ie those that you often meet in the context in which you are working or studying). The content will be put across in a direct way so that you can easily identify the information you need to tackle problems or tasks.
- 3 You must provide evidence of your Application of Number skills, as they are specified in the first column of the component grid. Your evidence must be in the form described in the third column ('Evidence requirements'). In order to provide this evidence, you will need to have the skills that are listed in the second column.
- 4 The guidance included within the qualification supports the requirements of the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It provides explanations of some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Level 1 and producing evidence of your work. It is not a mandatory part of the standards.

- 5 Many learners when producing evidence have found that it is both more interesting and more effective to complete a task or activity that covers all three components (N1.1, N1.2 and N1.3) as a continuous process. However, this is not a requirement.
- 6 The Mandatory Definitions (*Appendix A*) give the exact meaning of certain words in the document. You must always refer to them when you are developing your skills, gathering evidence, and preparing for assessment.
- 7 Witness statements must not be the only form of evidence that you provide. When you provide a witness statement, it must be supported by other evidence.

Evidence

At Level 1, you will be assessed via a portfolio of evidence. The term ‘evidence’ is used in this document to refer to the work you produce for final assessment.

You must:

- understand and tackle a problem or task
- obtain and interpret data
- carry out calculations
- check results
- interpret results
- present findings.

All your calculations should ideally be set in a purposeful context although standalone exercises are acceptable.

There must be evidence that all your work has been assessed and authenticated, for example there must be records/notes, written by a competent assessor, confirming that your work is your own and that it has achieved the required standard.

Skill requirements

In order to achieve this qualification, the evidence that you present for assessment needs to demonstrate that you can meet all of the skills requirements of the qualification for each of the component areas. A piece of work submitted could give assessment evidence for more than one skill.

Component: N1.1 Understand numerical data

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>N1.1.1 Understand and describe at least one given practical problem or task that involves a range of numerical data and information.</p>	<ul style="list-style-type: none"> check with an appropriate person that you understand the problem or task... 	<p>Evidence must show that the learner has understood and described the given problem or task.</p> <p>Evidence must normally be in the form of notes produced by the learner (by hand or electronically).</p>
<p>N1.1.2 Agree with an appropriate person how you will tackle it.</p>	<ul style="list-style-type: none"> ...and agree how you will tackle it. 	<p>Evidence must show that the learner has contributed to deciding how the task will be tackled.</p> <p>Evidence must normally be in the form of notes produced by the learner (by hand or electronically).</p>
<p>N1.1.3 Obtain relevant numerical data and information from at least two sources to meet the purpose of your task. Your sources must include at least one of a table, a chart, a graph, or a diagram.</p>	<ul style="list-style-type: none"> read, understand and extract information from tables, diagrams, charts and simple graphs read and understand numbers presented in different ways, including large numbers in figures or words, simple fractions, decimals, percentages, ratios and negative numbers collect and record data from accurate observations read scales on familiar measuring equipment using everyday units use scales on diagrams to find and interpret information use shape and space to record measurements and make observations. 	<p>Evidence must show that the learner is clear about how the data/information they obtain meets their purpose.</p> <p>Evidence must include data/information obtained from at least two different sources. At least one source must include a table, chart, graph or diagram.</p> <p>Evidence must include:</p> <ul style="list-style-type: none"> copies of source material details of the site/s of observation/measurement records of data/information obtained.

Component: N1.2 Carry out calculations

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>N1.2.1</p> <p>Use appropriate methods to get the results you need and describe the methods you have used.</p>	<ul style="list-style-type: none"> • identify and use methods and calculations that are suitable for your task. 	<p>Evidence must show that the learner can identify and describe the methods and calculations that are suitable for getting the results they need.</p> <p>Evidence of describing methods must normally be in the form of notes produced by the learner (by hand or electronically).</p>
<p>N1.2.2</p> <p>Use the data and information you have obtained to carry out calculations relevant to your task to do with:</p> <p>a) amounts or sizes</p> <p>b) scales or proportion</p> <p>c) handling statistics.</p>	<ul style="list-style-type: none"> • work to the levels of accuracy you have been given • add and subtract, with whole numbers and simple decimals with and without a calculator • multiply and divide a simple decimal by a whole number with and without a calculator • recall multiplication facts to 10 x 10 and make connections with division facts • understand and find simple fractions and percentages • recognise equivalencies between common fractions, percentages and decimals, and use these to find proportions of whole numbers • add, subtract, multiply, divide and record sums of money • read, measure and record time in common date and time formats 	<p>Evidence must show that the learner:</p> <ul style="list-style-type: none"> • has used data and information from N1.1 • is clear about the purpose and relevance of their calculations. <p>Evidence for the second bullet may be in the form of either notes or a witness statement.</p> <p>Evidence must include calculations (at least one from each category) relating to:</p> <ul style="list-style-type: none"> • amounts or sizes • scales or proportion • handling statistics. • and must show how the learner has checked their methods and calculations.

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>N1.2.2 continued</p>	<ul style="list-style-type: none"> • choose and use appropriate units and instruments to estimate, read, measure and compare length, weight, capacity, time and temperature • calculate within a system by <ul style="list-style-type: none"> – adding and subtracting common units of measure – converting units of measure in the system • work out different properties of a variety of shapes, including perimeters, areas and volumes • draw 2D shapes in different orientations using grids • use ratios and proportion • use probability to show (using fractions, decimals and percentages) that some events are more likely to occur than others • find the average (mean) of up to 10 items • find the range for up to 10 items • calculate efficiently using whole numbers, fractions, and decimals • use different ways of checking your methods and calculations • identify and correct any errors • check that your results make sense. 	<p>Evidence must show how the results make sense in relation to the purpose of the task. This evidence must normally be in the form of notes produced by the learner (by hand or electronically).</p>

Component: N1.3 Interpret results and present findings

You must provide evidence that you can:	In order to show that you are competent, you need to know how to:	Evidence requirements
<p>N1.3.1</p> <p>Present your findings using charts, graphs or diagrams.</p>	<ul style="list-style-type: none"> • interpret the results of your calculations • show how your results relate to your problem or task • identify and describe more than one appropriate way to present your findings to a familiar given audience, including using charts or diagrams • using the correct units, use appropriate ways to present your findings, including a chart or graph, and a diagram • label your work correctly. 	<p>Evidence must show that the learner can:</p> <ul style="list-style-type: none"> • choose how to present their findings using two appropriate ways (ie chart and diagram or graph and diagram) • present their findings correctly. <p>Whether or not ICT is used to produce graphics, evidence must show that the learner has checked their accuracy and can explain them fully. Evidence of this understanding may be in the form of a witness statement.</p>
<p>N1.3.2</p> <p>Describe what your results tell you and explain how they meet the purpose of your task.</p>	<ul style="list-style-type: none"> • describe what your results tell you and explain how they meet the purpose of your task. 	<p>Evidence must show that the learner can:</p> <ul style="list-style-type: none"> • describe the results of their calculations • explain how they relate to the purpose of the task. <p>Evidence must normally be in the form of written (by hand or electronically) notes produced by the learner.</p>

Guidance for Application of Number Level 1

This guidance supports the requirements set out in the three columns of the component areas and is intended to advise and help you and your teacher/tutor/trainer in your work. It explains some of the requirements of the standards that may be useful when you are developing the skill of Application of Number at Level 1 and producing evidence of your work. It is not a mandatory part of the standards.

N1.1.1

Check

You must be able to show that you understand the problem or task that you have been given, for example by repeating it in your own words and/or asking for more detail.

N1.1.2

Agree

You must be able to discuss and agree with an appropriate person how to tackle a problem or task, ie you will make the decision jointly with a teacher, tutor or supervisor.

N1.1.3

Read, understand, extract

You must know how to obtain information from:

- tables, such as a timetable or price list
- charts, such as a pictogram, pie chart or bar chart (for example to identify the number of items sold on a given day, the sales for a week, or the day with the most sales)
- single line graphs (for example to identify the temperature at given times of day, or the time of day when the temperature was highest or lowest)
- diagrams, such as a simple map, workshop drawing or plan using a scale such as 10 mm = 1 m.

Read and understand numbers

You must know how to deal with numbers presented in different ways, for example write down spoken numbers such as 'one thousand and fifty', or 'three fifths', recognise decimal fractions, know that one third is a bit more than 30 per cent or 0.3.

Collect, record

You must know how to read numbers from scales on familiar measuring equipment, for example from a thermometer, tape measure, or measuring jug, and how to make accurate observations, for example when carrying out stock checks, using everyday units for example minutes, millimetres, litres, grammes, degrees.

You must record measurements and observations accurately and in a way that is fit for the purpose of your task.

N1.2.1

Identify methods and calculations

You must know how to select the method and calculation you need for a task, for example 'I must multiply these numbers' or 'I must divide by 100'.

Describe

You must be able to make notes of or talk through your methods and what you did to achieve your purpose.

N1.2.2

Carry out calculations

Application of Number requires you to show that you can carry out a number of different types of calculations (amounts or sizes; scales or proportion; handling statistics). 'Amounts or sizes' is a single category. 'Scales or proportion' is another single category. From each of these categories, you must present at least one example as evidence.

You must be able to carry out calculations both with and without a calculator.

a) amounts or sizes

You must know how to:

- carry out calculations using:
 - simple decimals - in the context of everyday tasks such as dealing with money, or measuring using metric units, for example how to multiply and divide decimals by 10, 100, 1000, with and without a calculator
 - simple fractions and percentages - how to find parts, such as $\frac{2}{3}$ or $\frac{3}{4}$, of whole number amounts or measurements, and find percentages, including how to work out increases in amounts (for example a 10 per cent rise in cost) and decreases in amounts (for example a 20 per cent discount)
 - areas and volumes - for example how to find a rectangular area in m^2 or the volume of a box in cm^3
- convert within a system, for example convert 70 minutes to 1 hour 10 minutes, 0.36 metres to 360 mm, 0.6 hours to 36 minutes.

b) scales or proportion

You must know how to use simple scales on diagrams to work out actual measurements.

- When working with proportions, you must know how to increase and reduce whole-number amounts using ratio and direct proportion, for example scale up amounts of food for three times the number of people or put items in two piles, one with twice as many items as the other.

c) handling statistics

You must know how to calculate the range and the mean of a group of up to 10 numbers.

Levels of accuracy

You must know how to work to levels of accuracy given by a teacher, tutor or trainer, such as the nearest 10p or nearest hundredth, and to round results.

Check calculations

You must always check the accuracy of your calculations. This is often a mental process and you do not have to produce evidence every time you do it. Where there is a series of calculations of the same type, you must record evidence of how you have checked at least the first few of each type. For the remainder, accurate results must confirm that you have checked effectively. You must be aware of the importance of checking your results and be familiar with different methods of carrying out checks.

Check that results make sense

While a calculation may be accurate, it may not 'make sense' or be fit for purpose in relation to the problem or task that you have tackled. You must check this.

N1.3.1

Choose, use, present

You must be able to identify more than one way to present your findings, and to choose for yourself which is/are the most suitable for your purpose, for example when to present discrete data in a bar chart, or draw a diagram such as a plan of a room or piece of equipment. This does not mean that you have to present the same finding in two different ways, but that, in your work as a whole, you must use two different ways of presenting your findings.

N1.3.2

Describe and explain

You must know how to describe what the results of your calculations show in relation to the problem you have tackled (for example show that the results of your calculations suggest that a proposed solution will not work).

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