edexcel

Edexcel Entry 1, Entry 2 and Entry 3 Certificate in Mathematics (8922)

Specification and specimen assessment materials

Entry Level Certificate

First examination June 2013

Issue 2

ALWAYS LEARNING

PEARSON

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This specification is Issue 2. We will inform centres of any changes to this issue.

Acknowledgements

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Introduction

The Edexcel Entry Level Certificate in Mathematics is designed to be used in schools.

The qualification is based on the current National Curriculum programmes of study and recognises achievement at National Curriculum Levels 1, 2 and 3.

The qualification is part of a suite offered by Edexcel.

Key subject aims

Using and Applying Mathematics

- Use and apply mathematics in practical tasks, in real-life problems and within mathematics itself.

Number and Algebra

- Use a range of methods of computation and apply these to problems.
- Use calculators and computer software.

Shape, Space and Measures

- Explore shape and space through drawing and practical work using a range of materials.
- Use computer to transform graphic images and to solve problems.

Handling Data

- Collect, record, represent data and draw conclusions.

Key features and benefits of the qualification

- Wholly assessed by teachers.
- Links with GCSE Mathematics and Functional Skills Entry Level Mathematics.
- Provides opportunities for progression to GCSEs or Functional Skills Mathematics.
- Recognises small steps of achievement.
- Based on practical tasks.
- Teaching resources from: www.edexcelmaths.com (available to teachers only).
- Stage tests and using and applying mathematics tasks are provided.

Contents

Specification at a glance

The Edexcel Entry Certificate qualification comprises two assessments for each level – Entry 1, Entry 2 and Entry 3.

The assessments are:

- stage tests
- tasks.

To achieve a qualification students must achieve competence in both of these assessment areas.

For each qualification students must have demonstrated, through coursework, competence in both stage tests and tasks.

Overall, in order to achieve a qualification, students need to fulfil the following requirements.

Certificate	Requirements: stage tests	Using and Applying Mathematics: tasks
Entry 1	≥ 80% on one Entry 1 stage test	• Competence in all three skill areas at Entry 1 or above
Entry 2	≥ 80% on one Entry 2 stage test	• Competence in all three skill areas at Entry 2 or above
Entry 3	≥ 80% on one Entry 3 stage test	• Competence in all three skill areas at Entry 3, plus evidence of the use of a calculator

Stage tests	
• Internally assessed • Available at Entry 1, 2 and 3 • Availability: June or November • First award: June 2013	**50% of the Entry Level Certificate qualification**
Overview of content: • Number and Algebra • Shape, Space and Measure • Handling Data	
• Entry 1 stage tests contain 16 marks • Entry 2 and Entry 3 stage tests contain 20 marks	

Tasks	
• Internally assessed • Available at Entry 1, 2 and 3 • Availability: June or November • First award: June 2013	**50% of the Entry Level Certificate qualification**
Overview of content: • Using and Applying Mathematics	
Overview of assessment: Learners need to demonstrate performance in all three skills areas: • Skill area 1: making and monitoring decisions to solve problems • Skill area 2: communicating mathematically • Skill area 3: developing skills of mathematical reasoning	

Teachers can use the Candidate Record Form in Appendix 3 to record the assessment results of their students.

Qualification content

National Qualifications Framework (NQF) criteria

This qualification complies with the requirements of the common criteria and the Entry Level criteria which are prescribed by the regulatory authorities.

Knowledge, skills and understanding

This Edexcel Entry Level Certificate in Mathematics requires students to demonstrate knowledge, understanding and application of:

Using and Applying Mathematics

- make and monitor decisions to solve problems
- communicate mathematically
- develop skills of mathematical reasoning

Number and Algebra

- understand and use numbers and the number system
- perform calculations
- solve numerical problems

Shape, Space and Measure

- understand and use properties of shape
- understand and use properties of position, movement and transformation
- understand and use measures

Handling Data

- process, represent and interpret data.

Specification content for the stage tests

The specification content for the stage tests is presented for the three Entry Level Certificates:

- Entry 1 Certificate (stage 1)
- Entry 2 Certificate (stage 2)
- Entry 3 Certificate (stage 3).

In each case, the content is divided into three columns:

- left-hand column = content
- middle column = guidance note
- right-hand column = guidance examples.

The notes and examples, along with the specimen stage tasks, are intended as guidance for the interpretation of the content.

Note

- Entry 1 Certificate content is assumed at Entry 2 level and Entry 2 Certificate content is assumed at Entry 3 level.
- New material at Entry 2 level which is not included in the Entry 1 Certificate is shown in **bold.**
- Content added at Entry 3 level is also shown in **bold**.

Specification content for the stage tests (continued)

Entry 1 Certificate

Number and Algebra	Notes	Examples
Count orally up to 10, knowing the number names. Count small sets of objects, checking the total.	Sets of objects or pictures should include a variety of items.	Recount a set of objects in a different order, using the correct sequence of number, names.
Read, write and order numbers to 10		Find biggest, smallest. Put 7, 2, 4 in order. Write number '8' for 'eight' and vice versa.
Understand the operation of addition, subtraction as taking away and the relationship between them. Recognise situations to which they apply and use them to solve problems with whole numbers up to 10	Compare using terms such as more, fewer, the same etc.	Jane has 6 books, Frieda has 8 books. Who has more books? How many more? If 3 pencils are taken from a box of 10 pencils then 7 are left. When the 3 pencils are put back in the box there are 10 pencils again.
Use apparatus to add and subtract numbers to 10		Use cubes, rods, fingers etc.

Entry 1 Certificate (continued)

Shape, Space and Measures	Notes	Examples
Describe and discuss shapes and patterns that can be seen or visualised.	Use terms such as, straight, curved, flat, round, pointed etc.	Make a simple shape from cubes to form a picture. Find a solid that is pointed (eg a cone).
Recognise and use simple geometric features of shapes, sides/surfaces, rectangles, squares, circles, triangles and cubes.	Distinguish between squares, triangles, circles (names not required).	Count sides of a polygon. Count surfaces on a cube. Count the number of this shape□ amongst other shapes on a page.
Describe positions using common words. Copy, continue and make patterns.	On, inside, above, under, behind, next to etc. Repeating patterns of simple shapes. Numbers or shapes.	Continue a pattern ♦ □ ♦ □ String of beads □ ○ □ ○ Copy a pattern of beads on a string. Given a pile of cards (with two different shapes) make a repeating pattern. Write a repeating pattern using numbers, eg 1, 4, 1, 4, 1
Compare objects and events using appropriate language for direct comparison.	Use terms such as longer, shorter, taller, before- after- etc.	Draw a tree taller than this one. Colour the tallest tree. True or false 'the tree is taller than the house'?

Handling Data	Notes	Examples
Sort and classify a set of objects or pictures.	One criterion.	Sort logiblocs by one of: shape, colour, thickness, size. Classify animals by numbers of legs. Find the bottles in a pile of items for recycling.

Entry 2 Certificate

Number and Algebra	Notes	Examples
Count orally up to ***100 and beyond,*** knowing the number names. ***Count collections of objects, checking the total. Count in steps of different sizes.***	Distinguish between odd and even numbers.	Find the next number 10, 13, 16… Select the odd numbers in a small list. Shade even numbers in a 100 square. Count on from 7 in steps of 2 or 3.
Read, write and order numbers to 100, ***developing an understanding that the position of a digit signifies its value.***	Know 'tens' and 'units'.	Give the value of the 4 in 46 or 64. 40 is bigger than 4. Select even house numbers from a pile of letters and put in order for postman.
Use repeating patterns to develop ideas of regularity and sequencing.		1, 2, 2, 3, 1, 2, 2, 3, 1…
Explore and record patterns in addition and subtraction, explaining the patterns and using them to make predictions.	Know notation +, – Addition/subtraction 'tables', eg 0 + 1=1 10 – 1=9 1 + 1=2 9 – 1=8 2 + 1=3 8 – 1=7 Addition/subtraction. Squares. 'Adding on' patterns on 100 square.	
Know addition facts to 10.		
Develop a variety of methods for adding and subtracting, including using the fact that subtraction is the inverse of addition.		10 + 14 = 24 so 24 – 14 = 10 and 24 – 10 = 14 ☐ – 6 = 14

Entry 2 Certificate (continued)

Number and Algebra	Notes	Examples
Understanding the operation of addition, subtraction as taking away and the relationship between them. Recognise situations in which they apply and use them to solve problems with whole numbers ***up to 100.***		Jon gets £9 a week pocket money. Clare earns £25 on a paper round. Who gets more? How much more? I bought 3 items costing 29p, 56p and 12p. Find the total.
Understand the operation of multiplication and division as sharing and repeated subtraction, and use them to solve problems with whole numbers, money or measures.	Whole numbers and money up to 100.	How much will 3 lollipops at 5p each cost? Work out how many 5p lollipops can be bought with 15p. 24 pupils have to be put into 4 teams all the same size. How many pupils in each team?
Choose a suitable method of computation, using apparatus where appropriate.	Without a calculator, addition and subtraction of tens and units.	

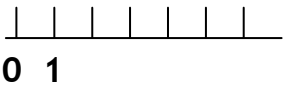
Entry 2 Certificate (continued)

Shape, Space and Measures	Notes	Examples
Describe and discuss shapes and patterns that can be seen or visualised.		Find the pattern ∆△□□ ○○ on a grid of symbols. Create pictures and patterns using 2D shapes. Count how many triangles there are in a pattern. Create a 'face' using 2 circles, 1 triangle and 1 rectangle.
Recognise and use the geometric features of shapes, including vertices, sides, edges, and faces; rectangles, square, circles, triangles and cubes.	Use the terms, vertex, face, edge (of solid) and side (in 2-D). Use the names rectangle, square, circle, triangle, cube.	Count the number of faces, vertices and edges on a solid. Select triangles from a set of pictures.
Describe positions using common words. ***Recognise movements in a straight line and rotations.*** Copy, continue and make patterns.	Forwards backward, turning right and left.	Recognise the same shape in different positions and orientations.
Understand angle as a measure of turn and recognise quarter-turns, half-turns and right angles.	Know left and right turns. Know that ⩒ represents a bigger turn than v (degrees not required).	Turn an object through 1, 2 or 3 right angles. To the right or left. Give instructions for moving a programmable toy (forwards, backwards, turns right and left).
Compare objects and events using appropriate language for direct comparison ***and then using common non-standard and standard units of length.***	Centimetres, metres.	
Choose and use simple measuring instruments.	Use a ruler marked in centimetres. Use a metric stick or trundle wheel	Steve measures two sides of a rectangular football pitch. The short side is __m. The long side is __m. How far is it all around the pitch? Measure a line in cm.

Entry 2 Certificate (continued)

Handling data	Notes	Examples
Sort and classify a set of objects ***using criteria related to their properties.***	Two or three criteria.	Find a shape that is round and flat etc. Find the blue triangles in a pile of logiblocs. Find the big blue triangles in a set of logiblocs.
Collect and record data arising from an area of interest, using an increasing range of charts, diagrams, tables and graphs.	Use a tally. Use data collection sheet to record data from simple surveys and experiments. Block graphs, pictograms (where scale or symbol represents one unit), simple tables with 2 columns, matching diagrams.	Record results of throwing a coin. Draw a block graph to show colours of cars in a car park.

Entry 3 Certificate

Number and Algebra	Notes	Examples
Count orally up to ***1000***, knowing the number names. Count collections of objects, checking the total. Count in steps of different sizes.	Simple sequences based on addition or subtraction.	Continue the sequence 2, 5, 8, 11, … 100, 95, 90, 85, 80, …
Read, write and order numbers ***up to 1000***, developing an understanding that the position of a digit signifies its value.	Know hundreds, tens, and units.	Give the value of the 4 in 462, 642, 264. Write the number 869 in H, T, U, columns.
Recognise and use in context simple fractions, including halves and quarters, decimal notation in recording money and negative numbers.	Fractions to include 1/2s, 1/4s, 1/5s, 1/10s and notation. Money in pounds and pence.	Shade 7/10 of a rectangle. Record 103p in £ Read or draw on a thermometer a temperature of –4° C. Complete this number line  **0 1**
Use repeating patterns to develop ideas of regularity and sequencing.		
Explore and record patterns in addition and subtraction ***and the pattern of multiples, eg 3, 6, 9, 12,*** explaining the patterns and using them to make predictions. ***Progress to exploring patterns involving multiplication and division, including those within a hundred-square of multiplication facts.***	Understand and use the term 'multiple'. Find patterns of multiples on 10 × 10 squares; complete multiplication squares. Multiplication tables. Symmetry of 10 × 10 multiplication squares.	Use 10 × 10 multiplication square to find 56 ÷ 7.

Entry 3 Certificate (continued)

Number and Algebra	Notes	Examples
Know addition facts to ***20. Learn multiplication and division facts relating to the 2s, 3s, 4s, 5s, and 10s and use these to learn other facts, (eg double multiples of 2 to produce multiples of 4) and to develop mental methods for finding new results.***	Multiplication up to 5×5 and all those in the 2, 3, 4, 5 and 10 times table.	
Develop a variety of methods for adding and subtracting, including using the fact that subtraction is the inverse of addition.	**Use mental strategies for adding and subtracting numbers up to 2 digits.** **Use written methods for adding and subtracting numbers up to 3 digits.**	**27 + 42 can be considered as 27 + 3 then 30 + 39** **63 – 27 can be considered as 63 – 20 – 3 – 4**
Use a basic calculator reading the display.	**Use a calculator to add lists of whole numbers.** **Recognise that non-integer answers to divisions indicate there is a remainder and find it.**	**18 ÷ 5 = 3.6 means 3 lots of 5 and some left over.** **3 lots of 5 are 15, so 3 are left over.**
Understand the operation of multiplication and division as sharing and repeated subtraction and use them to solve problems with whole numbers or money. ***Understanding and dealing appropriately with remainders.***	Division of whole numbers <100 by single digit numbers only.	Work out how many 5p lollipops can be bought with 18p and how much is left over. Realise that 3.6 lollipops is not a sensible answer.

Entry 3 Certificate (continued)

Shape, Space and Measures	Notes	Examples
Describe and discuss shapes and patterns that can be seen or visualised.		
Classify shapes according to mathematical criteria.	To include faces, vertices, edges, sides; by shape (eg hexagon); lines of symmetry; right angles.	
Recognise and use the geometric features of shapes, including vertices, sides/edges and surfaces; rectangles (including squares), circles, triangles, cubes, ***cuboids, hexagons, pentagons, cylinders and spheres. Recognise reflective symmetry in simple cases.***	Identify simple '3-D' shapes from pictures.	
Describe positions using common words. Recognise movements in a straight line and rotations, ***and combine them in simple ways.*** Copy, continue and make patterns.	Describe a simple journey on a grid.	Give instructions for moving a programmable toy.
Understand angle as a measure of turn and recognise quarter-turns and half turns and right angles.		

Entry 3 Certificate (continued)

Shape, Space and Measures	**Notes**	**Examples**
Compare objects and events using appropriate language for direct comparison and then using common non-standard and standard units of length ***Use a wider range of standard units, including standard units of time, choosing units appropriate to a situation. Estimate with these units.***	To include gram, kilogram, litre, hours, minutes, seconds. Not including time intervals in mixed units. Make sensible estimates of length and time.	
Choose and use simple measuring instruments, ***reading and interpreting number and scales with some accuracy.***	To include clocks, thermometers, kitchen scales, speedometers etc. (graduated in units only).	
Handling data	**Notes**	**Examples**
Sort and classify a set of objects using criteria related to their properties.		
Collect, record ***and interpret*** data arising from an area of interest, using an increasing range of charts, diagrams, tables and graphs.	Extract specific information from lists and tables. Draw and interpret bar charts and pictograms where the symbol represents a group of units. (Axes will be drawn and labeled.)	

Specification content for tasks

Tasks set for students should provide access to the three skill areas of Using and Applying Mathematics across stages 1, 2 and 3.

The subject content is not split into Entry 1, Entry 2 and Entry 3 in the following lists. Some notes and examples are given but teachers should check the skill areas and the stage test content for the requirements for the Entry 1, Entry 2 and Entry 3 Certificates.

Skill area 1	**Notes**	**Examples**
Look for ways of overcoming difficulties.		Get some cubes to help with addition.
Select an approach.	Show an understanding of the task. Find a reasonable approach whether or not 'best'.	
Select and use appropriate mathematics and resources.	Mathematics within the content lists for stage tests.	Decide to use a ruler for measuring the thickness of a book; a trundle wheel for measuring the school field. Recognise totals are found by adding

Specification content for tasks (continued)

Skill area 2	Notes	Examples
Understand and use mathematical language and notation.	Mathematical language and notation within the content lists for stage tests.	Use terms such as 'behind', 'next to' at Entry 1. Use symbols +, −, ×, ÷ at Entry 2. Use terms such as 'triangle', 'face', at Entry 2; 'symmetry' at Entry 3.
Use and interpret mathematical forms of communication.	Use objects, diagrams, graphs and symbols as in the stage test lists.	
Present work clearly.	Use objects, diagrams, graphs and symbols as in the stage test lists. Explain work orally.	
Check solutions.	Simple checks.	May be by repetition; finding another method; looking for more 'ways' to do something or for checking; repeats in a list.

Skill area 3	Notes	Examples
Explain how they arrived at a conclusion or solution to a problem.	Simple problems.	Explain patterns and relationships (see **Content for stage tests**).
Understand general statements and recognise particular examples.		Even numbers end in 0, 2, 4, 6, 8 (Entry 2). Odd + odd = even. eg 3 + 5 = 8

Evidence requirements for tasks

To demonstrate competence in the tasks, evidence must be shown in each of the three skill areas, as given below.

Certificate	Skill area 1: making and monitoring decisions to solve problems	Skill area 2: communicating mathematically	Skill area 3: developing skills of mathematical reasoning
Entry 1	Students use mathematics as an integral part of classroom activities.	Students represent their work with objects or pictures and discuss it.	Students recognise and use a simple pattern, usually based on their experience.
Entry 2	Students select the mathematics for some classroom activities.	Students discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams	Students can explain why an answer is correct.
Entry 3	Students try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise their work and check results	Students discuss their work and are beginning to explain their thinking. They use and interpret mathematical symbols and diagrams.	Students show that they understand a general statement by finding particular examples that match it.

Photocopiable tasks with task-specific assessment guidelines, called performance indicators, will be provided by Edexcel on the secure area of the website (www.edexcel.com). Centres can select these and integrate them into their own schemes of work. Centres may also choose to use their own tasks, including data-handling tasks.

Evidence of competence:

- may come from one or more task
- may be oral, practical or written, or any combination of these
- must be summarised by a teacher on a record form
- must be certified by a teacher as the student's own work.

To achieve an Entry Level Certificate, students must show competence in each of the three skill areas using and applying mathematics. The lowest level of achievement determines the final level of the certificate awarded.

For example:

Skill area 1	Skill area 2	Skill area 3	gives	Entry 1 award on task
Entry 2	Entry 2	Entry 1		

Stage tests

Three tests will be provided at each of the three stages (ie Entry 1, Entry 2 and Entry 3), together with a teacher's mark scheme.

The stage tests:

- are photocopiable masters
- are confidential and must be kept secure along with the teacher's mark scheme
- do not allow the use of calculators
- should be given at an appropriate time for each student
- should be undertaken in normal classroom conditions and be the student's own work
- have no time limit
- may be read to the students by the teacher with the normal level of support given to students with special requirements. This may include, for example, the use of practical equipment, such as Cuisenaire rods, Dienes apparatus and counters, which may make the tests more accessible. It is also possible for students with special requirements to use IT support
- must not be taken out of the teacher's direct supervision by a student at any time
- must be marked by the teacher according to the published mark scheme
- may not be repeated
- have three versions for each stage, for students who are unsuccessful on their first or second attempt
- must be kept secure when marked
- are moderated by Edexcel.

Differentiation

Differentiation between students across the ability range will occur by means of task, process, outcome, response and level of award.

Candidate Record Form

Teachers can use the Candidate Record Form in Appendix 3 to record the assessment results of their students.

Specimen materials

Stage tests

The specimen questions and mark schemes exemplify the standards required for each award.

For the stage tests, students are expected to be in their normal classroom environment and to have the support they normally receive.

Tests may involve simple apparatus, such as cubes, teachers should check before administering a test. Where students would normally collect such items for themselves this is allowed, providing that the teacher is still able to certify that the work on the test is the student's own.

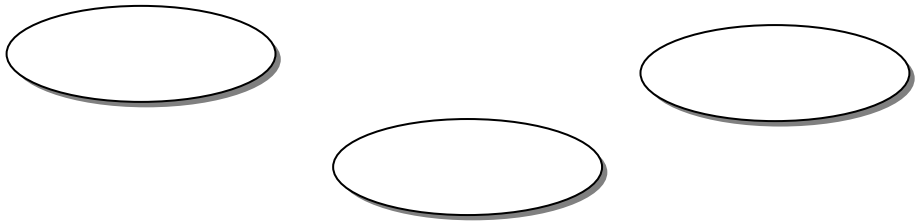
Task

A specimen for the assessment of Using and Applying Mathematics is also provided, together with the associated teacher's notes and assessment guidelines.

Stage tests

Specimen questions for Entry 1 award

1 How many counters? **(1)**



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2 Write these numbers in order.

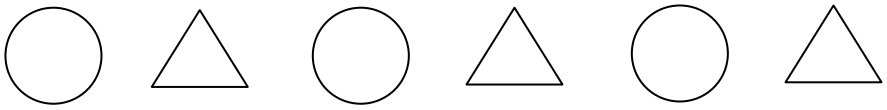
Start with the smallest. **(3)**

9 5 2 7

.....

3 What comes next?

Draw it. **(1)**



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4 What comes next?

Write it down. **(1)**

1 2 3 4 5 6 ?

.....

Specimen questions for Entry 1 Certificate (continued)

5 How many drinks? **(1)**

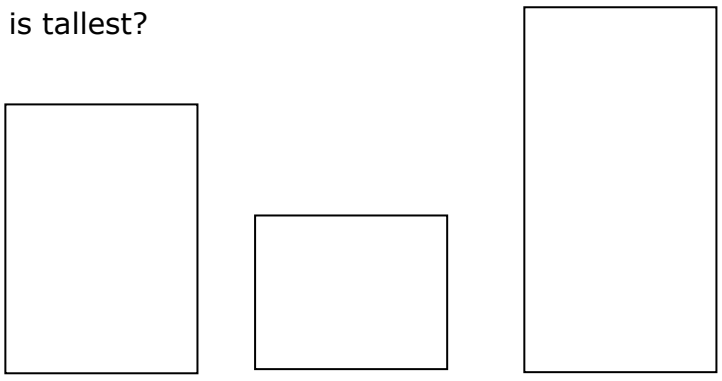
makes .....

6 You have 9 sweets.

You eat three.
How many are left? **(1)**

.....

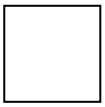
7 Which is tallest?

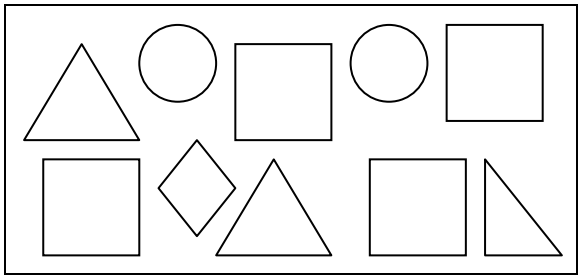


A B C **(1)**

.....

Specimen questions for Entry 1 Certificate (continued)

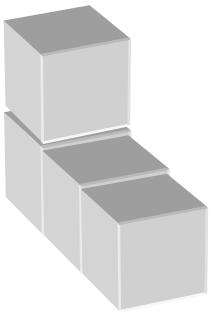
8 How many of these shapes  are in the box? **(1)**



……..

9 Use cubes.
Make this shape.

Show your teacher your shape. **(2)**



10 Take the shape apart.
Tell your teacher how many cubes you used. **(1)**

Specimen questions for Entry 1 Certificate mark scheme

Question number	Answer	Mark	Notes
1	3	1	
2	2 5 7 9	3	1 mark for 2 first 1 mark for order correct
3	draws circle	1	should be at right end of line
4	7	1	
5	7	1	
6	6	1	
7	C	1	
8	4	1	
9	check shape	2	1 mark for using 4 cubes 1 mark for correct shape
10	says 'four'	1	

Specimen questions for Entry 2 Certificate

1 Which of these are odd numbers?

6 9 13 12 27 **(1)**

.....

2 Count on from 10 in steps of 3 **(1)**

10 **.....** **.....** **.....**

3 Write these numbers in order, smallest first. **(1)**

61 21 15 63

.....

4 (a) Which is the largest number? **(1)**

47 74 18 81

.....

(b) Write the largest number in words**.** **(1)**

.....

5 What comes next?

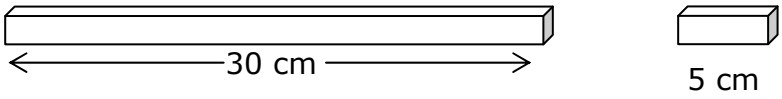
Write it down. **(1)**

2 5 5 3 2 5 5 3 2

.....

Specimen questions for Entry 2 Certificate (continued)

6



How many 5 cm blocks can be cut from a 30 cm piece of wood? **(1)**

.....

7 What is the total cost? **(1)**

.....

8 Work out: **(1)**

$$\begin{array}{r} 4\ 9 \\ -2\ 6 \\ \hline \\ \hline \end{array}$$

9 How many cookies can you buy for 20p? **(1)**

.....

Specimen questions for Entry 2 Certificate (continued)

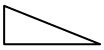
10 Find the missing numbers. **(2)**

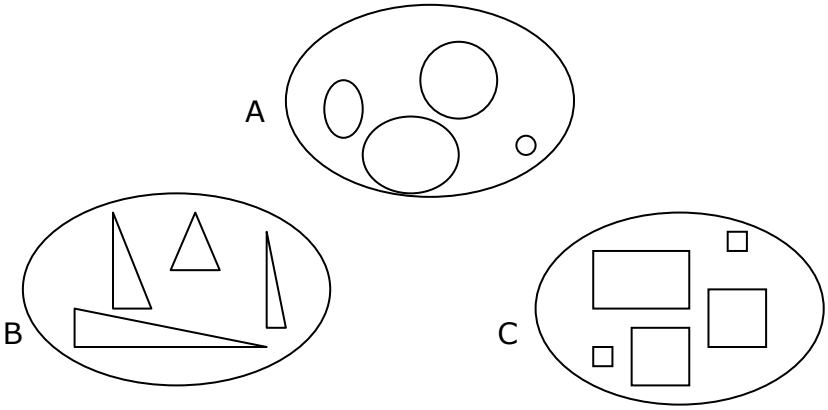
(a) …. +14 = 25 (b) …. – 6 = 14

11 How long is this line? **(1)**

_____

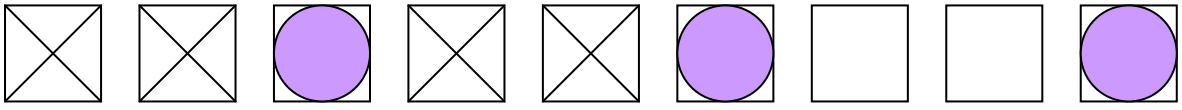
…….

12 Does  go in A, B or C? **(1)**



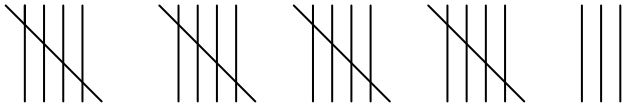
…….

13 Complete this pattern. **(1)**



Specimen questions for Entry 2 Certificate (continued)

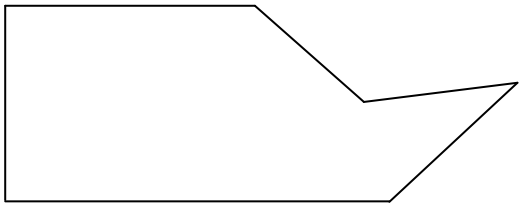
14 Write down the number of tally marks. **(1)**



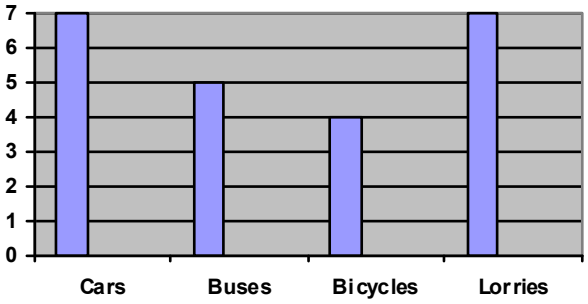
.....

15 Here is a shape.

Mark in all the right angles. **(1)**



16 This bar graph shows the results of a traffic survey. **(2)**



(a) How many cars? .....

(b) How many bicycles? .....

Specimen questions for Entry 2 Certificate mark scheme

Question number		Answer	Mark	Notes
1		9, 13 and 27	1	All correct
2		13, 16, 19	1	All numbers correct
3		15, 21, 61, 63	1	Correct order only
4	(a)	81	1	
	(b)	eighty one	1	
5		5	1	
6		6	1	
7		46p	1	
8		23	1	Both numbers required
9		5	1	
10	(a)	11	1	
	(b)	20	1	
11		6 cm	1	
12		B	1	
13		Pattern correctly finished	1	
14		23	1	
15		2 right angles correctly marked	1	
16	(a)	7 cars	1	
	(b)	4 bicycles	1	

Specimen questions for Entry 3 Certificate

1 (a) What is the largest number you can make with these cards? **(2)**

…….

(b) What is the smallest number you can make using all the cards?

…….....

2 Clue: one more than half of fifty

What is the number? **(1)**

……..

3 Write a clue for the number 37 **(1)**

……

……..……..…….

4 Work out

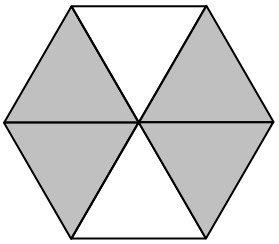
$3 \times 5 =$ …… **(1)**

5 Work out

$28 \div 4 =$ …… **(1)**

Specimen questions for Entry 3 Certificate continued

6 What fraction of this shape is shaded? **(1)**



…….

7 Work out **(1)**

$$\begin{array}{r} 412 \\ -\,127 \\ \hline \end{array}$$

……

8 Which of these numbers are multiples of ten? **(1)**

30 **380** **308** **385** …….

9 Write 'seven hundred and forty nine' in figures. **(1)**

……..

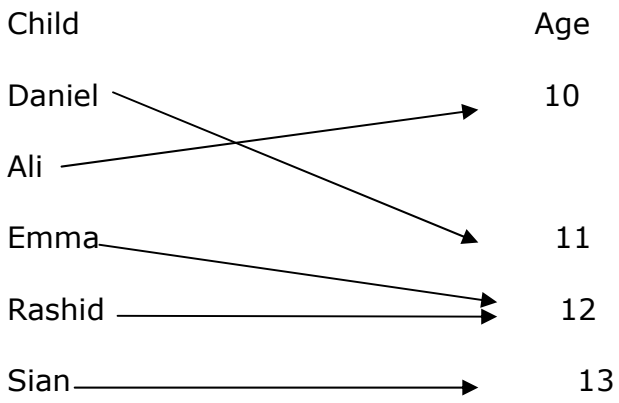
10 Here is a number pattern.

Two of the numbers are missing.

6 **12** **18** **…….** **…….** **36**

Write in the missing numbers. **(1)**

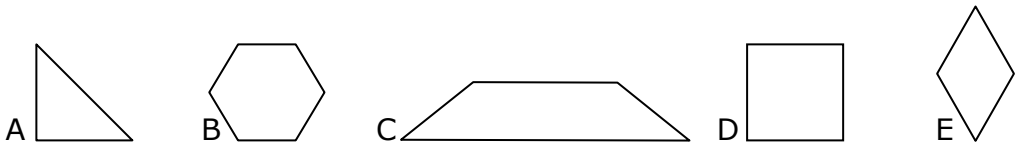
11 This diagram shows how old some children are. **(2)**



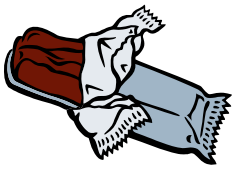
a) How old is Ali? .....

b) How many children are 12 years old? .....

12 Draw a circle around the hexagon. **(1)**



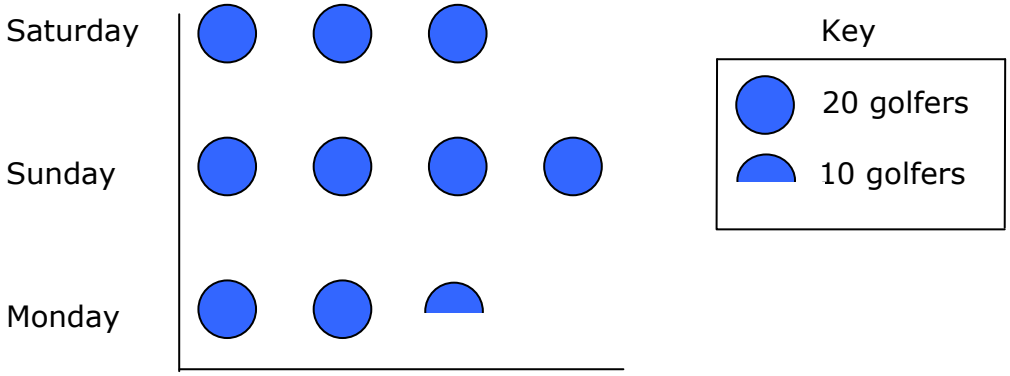
13 (a) How many chocolate bars can be bought for 90p? **(2)**



23p .....

(b) How much change? .....

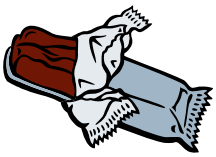
14 The pictogram shows the number of golfers that played golf at the local golf club during one week.



(a) How many golfers played on Sunday? .....**(1)**

(b) How many golfers played on Monday? .....**(1)**

15 (a) How much would these three sweets cost? **(1)**


23p


19p

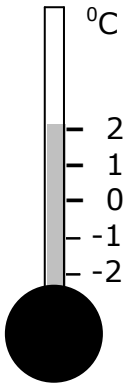

4p

.....

(b) How much change from 50p? .....**(1)**

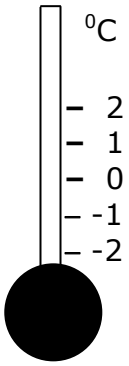
16 This thermometer shows the temperature.

(a) Write down the temperature shown by the thermometer. **(1)**



…….

(b) Mark –1 ^{0}C on this thermometer. **(1)**



Specimen questions for Entry 3 Certificate mark scheme

Question number		Answer	Mark	Notes
1	(a)	842	1	Number cards may be used
	(b)	248	1	
2		26	1	
3		any acceptable statement in words or numbers	1	
4		15	1	
5		7	1	
6		4/6 or 2/3	1	
7		285	1	
8		30 and 380	1	Both numbers required
9		749	1	
10		24 and 30	1	Both numbers correct
11	(a)	10	1	
	(b)	2	1	
12		B	1	
13	(a)	3	1	
	(b)	21	1	
14	(a)	80	1	
	(b)	50	1	
15	(a)	46p	1	
	(b)	4p	1	
16	(a)	2°C	1	
	(b)	−1°C marked correctly on the thermometer	1	

Set task

Rod trains: teachers' notes

Apparatus

For this task the students will require some Cuisenaire rods or one of the alternatives suggested below.

The rods are of the following colours and lengths:

Colour	Length
White	1
Red	2
Green	3
Pink	4
Yellow	5

It is unlikely that the students will require rods beyond yellow. If they do, the colours and lengths are:

Colour	Length
Dark green	6
Black	7
Brown	8
Blue	9
Orange	10

Alternatives

You may be in a school that does not have a supply of Cuisenaire rods, or they may be too small for your students to handle easily. There are alternatives.

You may:

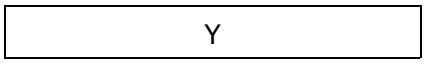
- be able to borrow some from a nearby (perhaps primary) school
- make equivalents by linking cubes
- make equivalents from cardboard strips
- make equivalents from squared paper.

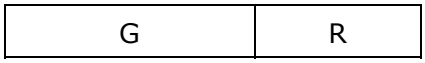
Presenting the task to students

We suggest that you engage the students in discussions about the number of **rod trains** they can make, which are equal to yellow, perhaps by showing them one and asking them to show you some others.

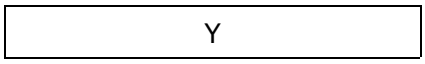
By the end of the discussion it is important that they have been shown certain ideas and had the word **different**, in the context of rod trains, explained to them.

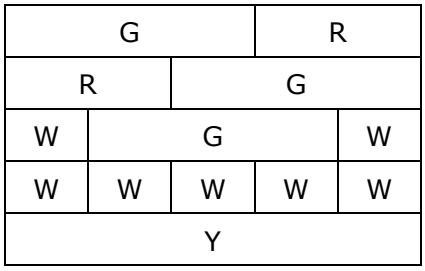
- Show the students how to make a rod train equal in length to yellow.





- Then show at least five rod trains equal to yellow. We suggest:





- Explain that yellow is a rod train equal to Yellow and that five white rods in a row is also a rod train equal to yellow.
- Explain that:

G	R

R	G

are different because they are in a different order.

- Tell them that:

W	G	W
G	W	W

are different.

Students working on the task

Once you have set the task up in this way, ask the students to make as many different rod trains as they can which are equal to various single rods.

The students' task sheets provide written questions – the task. You may read these instructions to the students or explain the task in any way that you feel is appropriate to their individual or collective needs.

It is important that you tell them to have a go at the problem, show what they are doing (or record their results) and talk or write about it. The deciding and doing, showing and explaining will give you an opportunity to assess their performance in each of the skill areas for *Using and Applying Mathematics.*

Results

Colour	Number of rod trains
White	1
Red	2
Green	4
Pink	8
Yellow	16

As the length of the rod increases by 1, then the number of rod trains doubles. (The general result is that for a rod of length n, the number of rod trains is 2^n, a result well beyond the scope of this specification.)

Entry 1 Certificate

Skill area 1

Students use mathematics as an integral part of classroom activities. They can use rods to create all 4 rod trains equal to green.

Skill area 2

Students represent their work with objects or pictures and discuss it. They can draw a diagram of all 4 rods trains equal to green, on squared paper if necessary. They can talk about the words 'equal' and 'different' in relation to rod trains.

Skill area 3

Students recognise a simple pattern or relationship, usually based on their experience. They can count and state or write down that the number of rod trains equal to green is 4.

Entry 2 Certificate

Skill area 1

Students select the mathematics for some classroom activities.

They can do all that is required for the Entry 1 award in skill area 1 and use the rods to create all 8 rod trains equal to pink using an approach or strategy of their own.

Skill area 2

Students discuss their work using familiar mathematical language and are beginning to represent it using symbols and simple diagrams.

They can respond to questions such as 'In what way are they equal?' by referring to 'length', show an awareness of different and same, and can record the 8 rod trains equal to pink using diagrams or symbols such as R, R, and R, W, W.

Skill area 3

Students show an awareness that there will be more rod trains for pink than for green when asked a question such as 'What happens if we try the problem for pink, will we get more or fewer rod trains than for green?'

They can count and record the correct number of rod trains equal to green and explain why the answer is correct.

Entry 3 Certificate

Skill area 1

Students try different approaches and find ways of overcoming difficulties that arise when they are solving problems. They are beginning to organise their work and check results.

Having established the correct results for green and pink, students organise their approach to the task for the yellow rod in any way which indicates their awareness of simple strategy, such as starting with pink, while then recognising that this leads to white, pink. They realise that there will be more rod trains for yellow than for pink, and can obtain at least 12 of the rod trains for yellow. They eliminate any duplicates.

Skill area 2

Students discuss their mathematical work and are beginning to explain their thinking. They can offer some brief explanation about their strategy and can say why they have eliminated any duplicates by reasoning such as 'This is the same as this'.

They can record at least 12 rod trains using diagrams, and start to develop a table or list of results.

Skill area 3

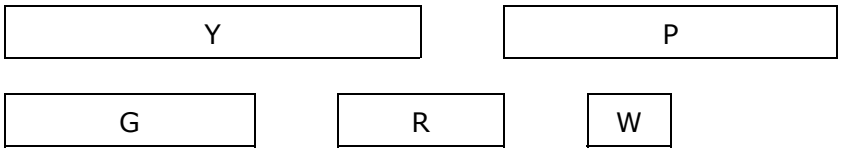
Students show that they understand a general statement by finding particular examples that match it.

They should be able to make a statement equivalent to 'As the length of the rod increases, then the number of rod trains increases', and recognise that for all rods, two trains will be the rod itself and all the whites.

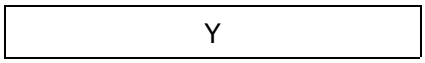
Students' task sheet

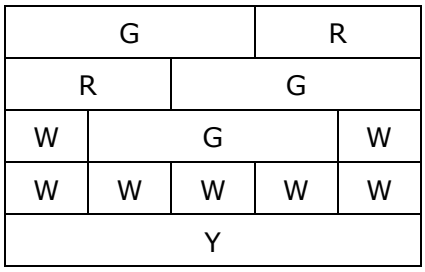
Rod trains

Here are the first five rods:



Here are 4 different rod trains equal to yellow:





1 How many different rod trains can you make equal green?

2 How many different rod trains can you make equal to pink?

3 How many different rod trains can you make equal to yellow?

4 Tell your teacher, or write down, as much as you can about what you have done and what you have found out.

Assessment

Assessment summary

The Edexcel Entry Certificate qualification is awarded at three levels:

- Entry 1
- Entry 2
- Entry 3.

Assessment is based on two components:

- stage tests
- tasks.

To achieve a qualfication students must achieve competence in both of these assessment areas.

For each award students must have demonstrated, through coursework, competence in both stage tests and tasks.

Overall, in order to achieve a qualification, students need to fulfil the following requirements.

Qualification	Requirements: stage tests	Using and Applying Mathematics: tasks
Entry 1	≥ 80% on one Entry 1 stage test	• Competence in all three skill areas at Entry 1 or above
Entry 2	≥ 80% on one Entry 2 stage test	• Competence in all three skill areas at Entry 2 or above
Entry 3	≥ 80% on one Entry 3 stage test	• Competence in all three skill areas at Entry 3, plus evidence of the use of a calculator

Stage tests	
• Internally assessed • Available at Entry 1, 2 and 3 • Availability: June or November • First award: June 2013	**50% of the Entry Level Certificate qualification**
Overview of content: • Number and Algebra • Shape, Space and Measure • Handling Data	
• Entry 1 stage tests contains 16 marks • Entry 2 and Entry 3 stage tests contain 20 marks	

tasks	
• Internally assessed • Available at Entry 1, 2 and 3 • Availability: June or November • First award: June 2013	**50% of the Entry Level Certificate qualification**
Overview of content: • Using and Applying Mathematics • Number and Algebra • Shape, Space and Measure • Handling Data	
Overview of assessment: Learners need to demonstrate performance in all three skills areas: • Skill area 1: making and monitoring decisions to solve problems • Skill area 2: communicating mathematically • Skill area 3: developing skills of mathematical reasoning	

Entering your students for assessment

Student entry

Details of how to enter students for this qualification can be found in Edexcel's *Information Manual*, copies of which (in CD format) are sent to all active Edexcel centres. The information can also be found on our website: www.edexcel.com

Classification code

Centres should be aware that students who enter for more than one qualification with the same classification code will have only one grade (the highest) counted for the purpose of the School and College Performance Tables.

Access arrangements and special requirements

Edexcel's policy on access arrangements and special considerations for GCE, GCSE, International GCSE, and Entry Level qualifications aims to enhance access to the qualifications for students with disabilities and other difficulties without compromising the assessment of skills, knowledge, understanding or competence.

Please see the our website (www.edexcel.com/sfc) for:

- the JCQ policy *Access Arrangements and Special Considerations, Regulations and Guidance Relating to Students who are Eligible for Adjustments in Examinations*
- the forms to submit for requests for access arrangements and special considerations
- dates for submission of the forms.

Requests for access arrangements and special considerations must be addressed to:

Special Requirements
Edexcel
One90 High Holborn
London WC1V 7BH

Equality Act 2010

Please see our website (www.edexcel.com) for information on the Equality Act 2010.

Internal standardisation

The tasks will be marked by the teacher against the set assessment criteria found in this specification.

If more than one teacher in a centre is marking students' work, there must be a process of internal standardisation to ensure that there is consistent application of the assessment criteria. Internal standardisation must include:

- stage tests procedures and marking
- checks that test assessments match the supporting evidence for each skill.

Authentication

All students must sign an authentication statement. Statements relating to work not sampled should be held securely in your centre. Those which relate to sampled students must be attached to the work and sent to the moderator. In accordance with a revision to the current Code of Practice, any student unable to provide an authentication statement will receive zero credit for the component. Where credit has been awarded by a centre-assessor to sampled work without an accompanying authentication statement, the moderator will inform Edexcel and the mark adjusted to zero.

Further information

For up-to-date advice on teacher involvement, please refer to the Joint Council for Qualifications (JCQ) *Instructions for conducting coursework/portfolio* document on the JCQ website: www.jcq.org.uk. For up-to-date advice on malpractice and plagiarism, please refer to the Joint Council for Qualifications (JCQ) *Suspected Malpractice in Examinations: Policies and Procedures and Instructions for Conducting Coursework/Portfolio* documents also available on the JCQ website: www.jcq.org.uk/.

Assessing your students

The first assessment opportunity for these qualifications will take place in the June 2013 series and in each following June and November series for the lifetime of the qualifications.

Awarding and reporting

The grading, awarding and certification of these qualifications will comply with the requirements of the current GCSE/GCE Code of Practice, which is published by the Office of Qualifications and Examinations Regulation (Ofqual).

Edexcel Entry Level Certificate qualifications will be graded as pass or fail and are awarded at three levels:

- Entry 1
- Entry 2
- Entry 3.

The first certification opportunity for the Edexcel Entry Level Certificate in Mathematics will be 2013.

Language of assessment

Assessment of these qualifications will be available in English only. Assessment materials will be published in English only and all work submitted for moderation must be produced in English.

Malpractice and plagiarism

For up-to-date advice on malpractice and plagiarism, please refer to the Joint Council for Qualifications (JCQ) *Suspected Malpractice in Examinations: Policies and Procedures* document on the JCQ website: www.jcq.org.uk/.

Student recruitment

Edexcel's access policy concerning recruitment to our qualifications is that:

- they must be available to anyone who is capable of reaching the required standard
- they must be free from barriers that restrict access and progression
- equal opportunities exist for all students.

Prior learning

These qualifications builds on the content, knowledge and skills developed in the Key Stage 3 Programme of Study for Mathematics as defined by the current National Curriculum Orders for England.

Progression

These qualifications support progression to GCSE Mathematics or Functional Skills.

Support and training

Edexcel support services

Edexcel has a wide range of support services to help you implement these qualifications successfully.

ResultsPlus – ResultsPlus is an application launched by Edexcel to help subject teachers, senior management teams, and students by providing detailed analysis of examination performance. Reports that compare performance between subjects, classes, your centre and similar centres can be generated in 'one-click'. Skills maps that show performance according to the specification topic being tested are available for some subjects. For further information about which subjects will be analysed through ResultsPlus, and for information on how to access and use the service, please visit www.edexcel.com/resultsplus.

Ask the Expert – To make it easier for you to raise a query with us online, we have merged our **Ask Edexcel** and **Ask the Expert** services.

There is now one easy-to-use web query form that will allow you to ask any question about the delivery or teaching of Edexcel qualifications. You'll get a personal response, from one of our administrative or teaching experts, sent to the email address you provide.

We'll also be doing lots of work to improve the quantity and quality of information in our FAQ database, so you'll be able find answers to many questions you might have by searching before you submit the question to us.

Support for students and learners

Learning flourishes when students take an active interest in their education and when they have all the information they need to make the right decisions about their futures. With the help of feedback from students and their teachers, we've developed a website for students that will help them:

- understand subject specifications
- access past papers and mark schemes
- find out how to get exams remarked
- learn about other students' experiences at university, on their travels and entering the workplace.

We're committed to regularly updating and improving our online services for students. The most valuable service we can provide is helping schools and college unlock the potential of their learners.

Training

A programme of professional development and training courses, covering various aspects of the specification and examination, will be arranged by Edexcel. Details can be obtained from our website: www.edexcel.com.

Appendices

Appendix 1: Wider curriculum

Signposting and development suggestions

Issue	Level	Opportunities for development
Spiritual	All	The Entry Level Certificates enable centres to provide courses in mathematics that allow students to discriminate between truth and falsehood. As students explore mathematical models of the real world there will be many naturally arising moral and cultural issues, environmental and health and safety considerations and aspects of European development for discussion, for example: • use and abuse of statistics in the media • financial and business mathematics • how mathematics is used to communicate climate change • cultural and historical roots of mathematics • use of mathematics in cultural symbols and patterns.
Moral	All	
Ethical	All	
Social	All	
Legislative	All	
Economic	All	
Cultural	All	
Sustainable	All	
Health and safety	All	
European initiatives	All	

Appendix 2: Codes

Type of code	Use of code	Code number
National classification codes	Every qualification is assigned to a national classification code indicating the subject area to which it belongs. Centres should be aware that students who enter for more than one qualification with the same classification code will have only one grade (the highest) counted for the purpose of the school and college performance tables.	2210
National Qualifications Framework (NQF) codes	Each qualification title is allocated a National Qualifications Framework (NQF) code. The NQF code is known as a Qualification Number (QN). This is the code that features in the DfE Funding Schedule, Sections 96, and is to be used for all qualification funding purposes. The QN is the number that will appear on the student's final certification documentation.	The QN for this qualification is: 100/1062/2
Cash-in codes	The cash-in code is used as an entry code to aggregate the student's scores to obtain the overall grade for the qualification. Centres will need to use the entry codes only when entering students for their qualification.	8922
Entry codes	The entry codes are used to: • enter a student for assessment • aggregate the student's paper scores to obtain the overall grade for the qualification.	Please refer to the Edexcel *Information Manual*, available on the Edexcel website

Appendix 3: Candidate Record Form

MATHEMATICS 8922 ENTRY LEVEL CERTIFICATE

CANDIDATE RECORD FORM												
CANDIDATE NAME						CENTRE NAME						
CANDIDATE NUMBER						CENTRE NUMBER						

Record of stage tests			
Stage test	Date	Mark	Pass

DECLARATION TO BE SIGNED BY TEACHER-EXAMINER

I declare that the activities of the candidates in respect of the marks recorded on this record form have been kept under regular supervision and that, to the best of my knowledge, no assistance has been given apart from any which is accepted under the scheme of assessment and has been identified and recorded.

Signed
……. **Date …….**

Signed
……. **Date …….**

Signed
……. **Date …….**

Signed
……. **Date …….**

Signed
……. **Date …….**

Signed
……. **Date …….**

Record of using and applying mathematics tasks

CANDIDATE NAME		CENTRE NAME	
CANDIDATE NUMBER		CENTRE NUMBER	

Task	Skill Area 1	Skill Area 2	Skill Area 3
	Best Achieved **1 2 3**	Best Achieved **1 2 3**	Best Achieved **1 2 3**

If claiming level 3, has the candidate used a calculator during the course? Yes/No

Overall Award on tasks 1 2 3

Publications Code W029620 March 2012