GCSE MATHEMATICS

Revised Specification
for first teaching September 2010

Guidance for teachers on Grading, Aggregation, Resit and Terminal Rules

1   Introduction

This booklet is intended as a guide for teachers and students of the revised GCSE Mathematics specification, for courses starting from September 2010.

It gives information on the unitised system, details of the GCSE Mathematics examinations, and notes and examples to explain the grading, aggregation and resit rules associated with this new specification.

This qualification is designed as a two-year course and students may take all assessments at the end of the course. However, as the qualification is unitised, students may take assessments during the course.

Students sitting this revised 2010 specification may not transfer module results from the previous GCSE Mathematics Specification.
i.e. the N modules may not be used in conjunction with the new T units.

Time line for **GCSE Mathematics specifications:**
current specification (N modules) and revised specification (T units)

	Current Specification N Modules	**Revised Specification T Units**
January 2011	G2268 two-tier N1 – N6 Available for Award	
June 2011	G2268 N1 – N6 Available for Award	T1, T2, T3 & T4 No Certification
January 2012	G2268 N1 – N6 **Last Award of G2268 two-tier**	T1, T2, T3 & T4 No Certification
June 2012	**No further examinations offered for this specification**	T1, T2, T3, T4 T5 & T6 Revised specification available for **First Award**
January 2013		T1, T2, T3, T4 T5 & T6 Available for Award
June 2013		T1, T2, T3, T4 T5 & T6 Available for Award

2   Specification Structure

The revised CCEA GCSE Mathematics is unitised. Each unit T1, T2, T3, T4 will be assessed by a single written paper. Units T5 and T6 will be assessed by a pair of written papers.
There is no coursework or controlled assessment.

This means that students will study the GCSE Mathematics course in units. To achieve an award, students must sit two units. They can sit their GCSE examination one unit at a time, or sit both units together at the end of the course.

Students are required to study the content of at least two units. Full details of the subject content for the units are given in the specification. Elaboration of the subject content can be found in the Teacher Guide available in the support section of the Mathematics microsite.

Students may study either:

Foundation Tier:
      units T1 and T5
      or
      units T2 and T5

      available grades: C, D, E, F, G

or

Higher Tier:
      units T3 and T6
      or
      units T4 and T6

      available grades : A*, A, B, C , D, (E)

To achieve a GCSE Mathematics award, students must sit two tests:
one of T1, T2, T3 or T4, and one of T5 or T6.

T1, T2, T3, T4 will be examined for the first time in Summer 2011

T5 and T6 will be examined for the first time in Summer 2012

The first award will be in Summer 2012

3   Units

Unit	Assessment	Weighting	Targeted Grades	Max UMS
Foundation Tier				
T1	1 written paper with calculator 1 ½ hours	45%	E, F, G	89
T2	1 written paper with calculator 1 ½ hours	45%	C, D, E	125
T5	2 written papers: 1 without calculator - 1 hour 1 with calculator – 1 hour	55%	C, D, E, F, G	153
Higher Tier				
T3	1 written paper with calculator 2 hours	45%	B, C, D	143
T4	1 written paper with calculator 2 hours	45%	A*, A, B	180
T6	2 written papers: 1 without calculator – $1^{1}/_{4}$ hours 1 with calculator – $1^{1}/_{4}$ hours	55%	A*, A, B, C, D	220

For the entry fees associated with these units please see the relevant section in the 'Qualifications Administration Handbook' on the CCEA website.

4   Examination entry

4.1   Foundation Tier

A Foundation Tier student would **normally** sit the GCSE mathematics examinations in one of the following ways:

(a)   June 2011: T1
      June 2012: T1 (resit) and T5
      Cash-in June 2012

(b)   June 2011: T1
      January 2012: T2 (to improve UMS)
      June 2012: T2 (resit) and T5
      Cash-in June 2012

(c)   June 2011: T2
      June 2012: T5
      Cash-in June 2012

(d)   January 2012: T2
      June 2012: T2 (resit) and T5
      Cash-in June 2012

(e)   June 2012: T1 and T5
      Cash-in June 2012

(f)   June 2012: T2 and T5
      Cash-in June 2012

There are other allowable combinations.

4.2 Higher Tier

A Higher Tier student would **normally** sit the GCSE Mathematics examinations in one of the following ways:

(a)   June 2011: T3
      June 2012: T3 (resit) and T6
      Cash-in June 2012

(b)   June 2011: T3
      January 2012: T4 (to improve UMS)
      June 2012: T4 (resit) and T6
      Cash-in June 2012

(c)   June 2011: T4
      June 2012: T4 (resit) and T6
      Cash-in June 2012

(d)   January 2012: T4
      June 2012: T6
      Cash-in June 2012

(e)   June 2012: T3 and T6
      Cash-in June 2012

(f)   June 2012: T4 and T6
      Cash-in June 2012

There are other allowable combinations.

5   Reporting

Uniform Mark Scales (UMS) will be used to aggregate and report marks from individual assessment units. The maximum total uniform mark available is 400.
The number of uniform marks for each unit depends on its weighting.

		Unit T1, T2, T3, T4	Unit T5	Unit T6		AWARD
		45%	**55%**			
Max UMS →		**180**	**153**	**220**		**400**
Grade↓						
A*	T4 max	162 – 180		198 – 220		360 – 400
A		144 – 161		176 – 197		320 – 359
B	T3 max	126 – 143		154 – 175		280 – 319
C	T2 max	108 – 125	132 – 153	132 – 153		240 – 279
D		90 – 107	110 – 131	110 – 131		200 – 239
E	T1 max	72 – 89	88 – 109	88 – 109		160 – 199
F		54 – 71	66 – 87	66 – 87		120 – 159
G		36 – 53	44 – 65	44 – 65		80 – 119
U		0 – 35	0 – 43	0 – 43		0 – 79

The level of difficulty of a particular unit may vary slightly from one examination series to another. In order to allow a meaningful aggregation of the results from different series, the raw marks are converted to UMS marks after the grade boundaries are set.

A student cannot achieve a uniform mark on a unit higher than the range of grades for that unit; for example, on Unit T2 (highest grade available is C) a student cannot obtain more than 125 UMS.

The same standard of performance on the units taken at different times always gets the same number of UMS marks, so that we can use and compare results from one series of examinations to the next.

6   The Terminal and Resit Rules

The terminal assessment rule: at least 40 per cent of assessment for the whole qualification must be taken in the final examination series of the course. The final examination series is when the student cashes-in their results and obtains a grade. See examples in section 7.

1. The terminal assessment rule means that a student must sit <u>at least</u> **one** unit in the series where they cash-in. This can be either one of T1, T2, T3, T4, T5 or T6.

2. The 40% terminal assessment rule means that there is limited flexibility in the way that students can progress through the course.

3. The final grade **will** include the assessment unit result which satisfies the terminal assessment rule.

4. If there is more than one way of satisfying the terminal assessment rule, CCEA will generate the best possible grade.

5. Students are permitted up to two attempts at each unit: i.e. they may only resit an individual unit **once before certification**.

6. The better result for the two attempts at a unit will count towards the final grade, as long as the 40% terminal assessment rule is satisfied.

7. This means that the results for the unit that satisfies the terminal assessment rule will count (i.e. <u>will</u> be used to calculate the student's final grade) **even if** there is a better score for an earlier attempt at this unit. See example 4 in section 7.

8. Students must be entered for the subject cash-in in the terminal examination series.

9. The cash-in leads to a subject award with a grade.

10. Students cannot decline certification of this GCSE award after the results are published.

11. Unit results remain valid for the shelf life of the specification.

12. A student who is absent for an assessment has not used up one of their two attempts at that unit.

<u>Re-taking this qualification</u>

13. Students may re-take the full qualification as many times as they wish – either by re-sitting all the units, or by re-sitting some units and using previous results for others, subject to the terminal assessment rule being satisfied

14. When a qualification is re-taken, (i.e. after certification) a student may have up to two further attempts at each unit. However only the better of the last two results will count towards the final grade; or the last result if it is needed to satisfy the terminal assessment rule.

7   Examples to show the rules

Example 1

Andrea sits assessment unit T3 in June 2011.

In June 2012 she resits T3 and also takes unit T6.

Her UMS results are shown in the table below:

	Assessment Unit	
	T3	**T6**
June 2011	**121** (C)	
June 2012	117 (C) resit	**162** (B)
June 2012	Cash-in Grade B	

Since the result for unit T3 in the first attempt was better than the result in the second attempt, the UMS of 121 will be used together with the UMS of 162 in unit T6 to aggregate for the cash-in.

The result for unit T6 will fulfil the terminal assessment rule.

Total mark: 121 (T3) + 162 (T6) = 283, Grade B.

Example 2

Barry sits assessment unit T3 in June 2011.

In January 2012 he resits T3, and improves his UMS score.

In June 2012 he attempts T4 and also takes unit T6.

His UMS results are shown in the table below:

| | **Assessment Unit** | | |
	T3	**T4**	**T6**
June 2011	110 (C)		
January 2012	140 (B) resit		
June 2012		**147 (A)**	**174 (B)**
June 2012	Cash-in Grade A		

The UMS result for T4 in June 2012 and the UMS result for T6 in June 2012 are both used for Barry's final award.

Either result will fulfil the terminal rule.

Total mark: 147 (T4) + 174 (T6) = 321, Grade A.

Example 3

Clare sits assessment T2 in June 2012.

She then sits T5 in January 2013.

She resits both these units in June 2013,

Unfortunately, her June 2013 scores for both units are not as good as her previous scores.

Her UMS results are shown in the table below:

	Assessment Unit	
	T2	**T5**
June 2012	109 (C)	
January 2013		**135 (C)**
June 2013	**106** (D) resit	130 (D) resit
June 2013	Cash-in Grade C	

One of the unit results from June 2013 **must** be used in order to satisfy the terminal rule.

Using at least one of the June 2013 results, Clare's results could be combined in three different ways:

(i)   <u>T2 (106)</u> + <u>T5 (130)</u> = 236 grade D

(ii)   T2 (109) + <u>T5 (130)</u> = 239 grade D

(iii)   <u>T2 (106)</u> + T5 (135) = 241 grade C

CCEA will select the combination which will give the best possible grade while ensuring that the terminal assessment rule is met.

The best possible grade is using the UMS scores 106 (T2) and 135 (T5) = 241, Grade C.
T2 (106) will fulfil the terminal assessment rule.

Example 4

David sits assessment units T4 and T6 in January 2013.
He could cash-in his results in January 2013, and would achieve a grade A with 322 UMS.

However, David is disappointed with his T4 results and he decides to resit T4 in June 2013, hoping
to improve his total Uniform Mark Score.

Unfortunately he does not perform as well as expected in his second attempt at T4.

His UMS results are shown in the table below:

	Assessment Unit	
	T4	**T6**
January 2013	122 (C)	200 (A*)
June 2013	**117** (C) resit	
June 2013	Cash-in Grade B	

His June result for T4 is lower than January, but **must** be counted towards his final grade as this is
the only unit available to fulfil the terminal assessment rule.

Total mark: 117 (T4) + 200 (T6) = 317, Grade B.

Example 5

Emma sits assessment units T4 and T6 in January 2013.
She could cash-in in January 2013, and would achieve a grade B with 314 UMS

Her T4 results are disappointing so she then resits T4 in June 2013, hoping to improve her total Uniform Mark Score.

Her UMS results are shown in the table below:

	Assessment Unit	
	T4	**T6**
January 2013	122 (C)	**192** (A)
June 2013	**137** (B) resit	
June 2013	Cash-in Grade A	

Emma performs much better in her second attempt at T4.

Her June result for T4 **must** be counted as this is the only unit available to fulfil the terminal assessment rule.

Total mark: 137 (T4) + 192 (T6) = 329, Grade A.

Example 6

Mark sits assessment unit T5 in June 2012.

In January 2013 he sits T3.
He decides not to cash-in his results at this stage as his UMS is just one mark less than a grade C.

In June 2013, he resits T5.

His UMS results are shown in the table below:

	Assessment Unit	
	T3	**T5**
June 2012		130 (D)
January 2013	**109 (C)**	
June 2013		**142 (C)**
June 2013	Cash-in Grade C	

Mark performs much better in his second attempt at T5.

His June 2013 result for T5 **must** be counted as this is the only unit available to fulfil the terminal assessment rule.

Total mark: 109 (T3) + 142 (T5) = 251, Grade C.

Example 7   Re-taking this qualification

Jack sits assessment units T3 and T6 in January 2013.
He could cash-in in January 2013, and would achieve a grade A with 322 UMS.

However, Jack is disappointed with his T3 results and he decides to resit T3 in June 2013, hoping to improve his total Uniform Mark Score.
Unfortunately he does not perform as well as expected in his second attempt at T3.

His UMS results are shown in the table below

	Assessment Unit		
	T3	**T4**	**T6**
January 2013	122 (C)		**200 (A*)**
June 2013	**117 (C)** resit		
June 2013	Cash-in grade B		

Jack's result for T3 in June is lower than January, but **must** be counted towards his final grade as this is the only unit available to fulfil the terminal assessment rule.

Total UMS: 117 (T3) + 200 (T6) = 317, Grade B awarded in summer 2013

Jack then decides to re-take the qualification, and this time he enters for T3 in January 2014, and then T4 and T6 in June 2014.

His UMS results are shown in the table below

	Assessment Unit		
	T3	**T4**	**T6**
January 2013	122 (C)		**200 (A*)**
June 2013	**117 (C)** resit		
June 2013	Cash-in grade B		
January 2014	140 **(B)**		
June 2014		**162 (A*)**	195 **(A)**
June 2014	Cash-in grade A*		

The two results that will be used for the final certification will be 162 (T4) and 200 (T6)

Total UMS: 162 (T4) + 200 (T6) = 362, Grade A* awarded in summer 2014.

Example 8

Julie sits assessment units T3 and T6 in January 2013.
She could cash-in in January 2013, and would achieve a grade A with 322 UMS.

However, Julie is disappointed with her T3 results and she decides to resit T3 in June 2013, hoping to improve her total Uniform Mark Score.
Unfortunately she does not perform as well as expected in her second attempt at T3.

Her results are shown below

	Assessment Unit		
	T3	**T4**	**T6**
January 2013	122 (C)		**200 (A*)**
June 2013	**117 (C)** resit		
June 2013	Cash-in grade B		

Julie's result for T3 in June is <u>lower</u> than January, but **must** be counted towards her final grade as this is the only unit available to fulfil the terminal assessment rule.

Total UMS: 117 (T3) + 200 (T6) = 317, Grade B awarded in summer 2013

Julie then decides to retake the qualification, and this time she enters for T3 in January 2014, and then T3 resit and T6 in June 2014.

Her results are shown below

	Assessment Unit		
	T3	**T4**	**T6**
January 2013	122 (C)		200 (A*)
June 2013	117 (C) resit		
June 2013	Cash-in grade B		
January 2014	**114 (C)**		
June 2014	109 **(C)**		**205 (A*)**

The two results that will be used for the final certification will be 114 (T3) and 205 (T6)
The UMS 114 (T3) will be counted as it is the better of the last two results.
The UMS 205 (T6) will fulfil the terminal rule.
Total UMS: 114 (T3) + 205 (T6) = 319, Grade B awarded in summer 2014