



# **GCSE MATHEMATICS**

**Revised Specification  
for first teaching September 2017**

**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 2017.

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 2017 specification may not transfer module results from the previous GCSE Mathematics Specification.

i.e. the T modules may not be used in conjunction with the new M units.

## 2 Specification Structure

The revised CCEA GCSE Mathematics is unitised. Each unit M1, M2, M3, M4 will be assessed by a single written paper. Units M5, M6, M7 and M8 will be assessed by a pair of written papers (one non-calculator section, one calculator section). 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 GCSE Mathematics microsite.

To achieve a GCSE Mathematics award, students must sit two tests:

one of M1, M2, M3 or M4, and one of M5, M6, M7 or M8.

M1, M2, M3 and M4 will be examined for the first time in summer 2018

M5, M6, M7 and M8 will be examined for the first time in Summer 2019.

The first award will be in Summer 2019.

Students are recommended to study either:

### **Foundation Tier:**

units M1 and M5 available grades D, E, F, G

or

units M2 and M6 available grades C\*, C, D, E, F

**or**

### **Higher Tier:**

units M3 and M7 available grades B, C\*, C, D, E

or

units M4 and M8 available grades A\*, A, B, C\*, C

### 3 Units

<b>FOUNDATION TIER</b>				
Unit	Assessment	Weighting	Targeted Grades	Max UMS
M1	1 written paper with calculator 1 ¾ hours	45%	D, E, F, G	107
M5	2 written papers: 1 without calculator - 1 hour 1 with calculator - 1 hour	55%	D, E, F, G <b>(maximum grade D for this pathway)</b>	131
<b>OR</b>				
M2	1 written paper with calculator 1 ¾ hours	45%	C*, C, D, E, F	131
M6	2 written papers: 1 without calculator - 1 hour 1 with calculator - 1 hour	55%	C*, C, D, E, F <b>(maximum grade C* for this pathway)</b>	160

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

### 3 Units

<b>HIGHER TIER</b>				
Unit	Assessment	Weighting	Targeted Grades	Max UMS
M3	1 written paper with calculator 2 hours	45%	B, C*, C, D, E	143
M7	2 written papers: 1 without calculator - 1¼ hours 1 with calculator - 1¼ hours	55%	B, C*, C, D, E <b>(maximum grade B for this pathway)</b>	175
<b>OR</b>				
M4	1 written paper with calculator 2 hours	45%	A*, A, B, C*, C	180
M8	2 written papers: 1 without calculator - 1¼ hours 1 with calculator - 1¼ hours	55%	A*, A, B, C*, C <b>(maximum grade A* for this pathway)</b>	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 2020: M1  
June 2021: M1 (resit) and  
M5 Cash-in June 2021
  
- (b) June 2020: M1  
January 2021: M2 (to improve UMS)  
June 2021: M2 (resit) and M5 **or** M6  
Cash-in June 2021
  
- (c) June 2020: M2  
June 2021: M6  
Cash-in June 2021
  
- (d) January 2020: M2  
June 2020: M2 (resit) and M6  
Cash-in June 2020
  
- (e) June 2020: M1 and M5  
Cash-in June 2020
  
- (f) June 2020: M2 and M6  
Cash-in June 2020

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 2020: M3  
June 2021: M3 (resit) and M7  
Cash-in June 2021
  
- (b) June 2020: M3  
January 2021: M4 (to improve UMS)  
June 2021: M4 (resit) and M7 **or** M8  
Cash-in June 2021
  
- (c) June 2020: M4  
June 2021: M4 (resit) and M8  
Cash-in June 2021
  
- (d) January 2020: M4  
June 2020: M8  
Cash-in June 2020
  
- (e) June 2020: M3 and M7  
Cash-in June 2020
  
- (f) June 2020: M4 and M8  
Cash-in June 2020

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 maximum number of uniform marks for each unit depends on its weighting.

		Unit M1, M2, M3, M4	Unit M5, M6	Unit M7, M8		AWARD
		45%	55%			
Max UMS →		180	160	220		400
Grade ↓						
A*		Not awarded at unit level		Not awarded at unit level		
A		144 – 180		176 – 220		320 – 400
B	M3 max	132 – 143		161 – 175		292 – 319
C*	M2 max	121 – 131	148 – 160	148 – 160		268 – 291
D	M1 max	90 – 107	110 – 131	110 – 131		200 – 239
E		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 and raw mark boundaries may be adjusted depending on the accessibility of the unit. In order to allow a fair 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 M2 (highest grade available is C\*) a student cannot obtain more than 131 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 another.



## 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 at least one unit in the series where they cash-in. This can be either one of M1, M2, M3, M4, M5, M6, M7 or M8.
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 from 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. will 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.

### Re-taking this qualification

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 M3 in June 2020.

In June 2021 she resits M3 and also takes unit M7.

Her UMS results are shown in the table below:

	Assessment Unit	
	M3	M7
June 2020	<b>119 (C)</b>	
June 2021	117 (C) resit	<b>162 (B)</b>
June 2021	Cash-in	Grade C*

Since the result for unit M3 in the first attempt was better than the result in the second attempt, the UMS of 119 will be used together with the UMS of 162 in unit M7 to aggregate for the cash-in.

The result for unit M7 will fulfil the terminal assessment rule.

Total mark:  $119 (M3) + 162 (M7) = 281$ , Grade C\*

## Example 2

Barry sits assessment unit M3 in June 2020.

In January 2021 he resits M3, and improves his UMS score.

In June 2021 he attempts M4 and also takes unit M8.

His UMS results are shown in the table below:

	Assessment Unit		
	M3	M4	M8
June 2020	110 (C)		
January 2021	140 (B) resit		
June 2021		<b>147 (A)</b>	<b>174 (B)</b>
June 2021	Cash-in Grade A		

The UMS result for M4 in June 2021 and the UMS result for M8 in June 2021 are both used for Barry's final award.

Either result will fulfil the terminal rule.

Total mark:  $147 (M4) + 174 (M8) = 321$ , Grade A.

### Example 3

Clare sits assessment M2 in June 2020.

She then sits M6 in January 2021.

She resits both these units in June 2021.

Unfortunately, her June 2021 scores for both units are not as good as her previous scores.

Her UMS results are shown in the table below:

	Assessment Unit	
	M2	M6
June 2020	109 (C)	
January 2021		135 (C)
June 2021	106 (D) resit	130 (D) resit
June 2021	Cash-in Grade C	

One of the unit results from June 2021 **must** be used in order to satisfy the terminal rule.

Using at least one of the June 2021 results, Clare's results could be combined in three different ways:

- (i) M2 (106) + M6 (130) = 236 grade D
- (ii) M2 (109) + M6 (130) = 239 grade D
- (iii) M2 (106) + M6 (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 (M2) and 135 (M6) = 241, Grade C. M2 (106) will fulfil the terminal assessment rule.

#### Example 4

David sits assessment units M4 and M8 in January 2020 without requesting a cash-in. He could put in a late cash-in for his results in January 2020 (there will be a late cash-in fee for this) and he could achieve a grade A with 322 UMS.

However, David is disappointed with his M4 result and he decides to resit M4 in June 2020. He hopes to improve his total Uniform Mark Score.

Unfortunately he does not perform as well as expected in his second attempt at M4.

His UMS results are shown in the table below:

	Assessment Unit	
	M4	M8
January 2020	122 (C)	<b>200 (A)</b>
June 2020	<b>117 (C)</b> resit	
June 2020	Cash-in	Grade B

His June result for M4 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 (M4) + 200 (M8) = 317, Grade B

### Example 5

Emma sits assessment units M4 and M8 in January 2020 without cashing in. She could put in a late cash-in for January 2020 (there will be a late cash-in fee for this) and could achieve a grade B with 314 UMS.

Her M4 result is disappointing so she then resits M4 in June 2020, hoping to improve her total Uniform Mark Score.

Her UMS results are shown in the table below:

	Assessment Unit	
	M4	M8
January 2020	122 (C)	<b>192 (A)</b>
June 2020	<b>137 (B)</b> resit	
June 2020	Cash-in	Grade A

Emma performs much better in her second attempt at M4.

Her June result for M4 **must** be counted as this is the only unit available to fulfil the terminal assessment rule.

Total mark: 137 (M4) + 192 (M8) = 329, Grade A

### Example 6

Francis sits assessment unit M6 in June 2020. (It is **not** recommended to take M6 first as M6 has a dependency on M2 and Francis may not have studied all the content of M2).

In January 2021 he sits M3.

He decides not to request a late cash-in for his results at this stage as his UMS is just one mark less than a grade C.

In June 2021, he resits M6.

His UMS results are shown in the table below:

	Assessment Unit	
	M3	M6
June 2020		130 (D)
January 2021	<b>109 (C)</b>	
June 2021		<b>142 (C)</b>
June 2021	Cash-in	Grade C

Francis performs much better in his 2nd attempt at M6.

His June 2021 attempt at M6 **must** be counted as this is the only unit available to fulfil the terminal assessment rule.

Total mark: 109 (M3) + 142 (M6) = 251, Grade C

**Example 7** Re-taking this qualification

Jack sits assessment units M3 and M8 in January 2020. (This is **not** a recommended combination as M8 has a dependency on M4)

He could perform a late cash-in for January 2020 (there is a late cash-in fee for this) and would achieve a grade A with 322 UMS.

However, Jack is disappointed with his M3 result and he decides to sit M4 in June 2020, hoping to improve his total Uniform Mark Score.

His UMS results are shown in the table below:

	Assessment Unit		
	M3	M4	M8
January 2020	122 (C)		<b>200 (A)</b>
June 2020		<b>117 (C)</b> resit	
June 2020	Cash-in grade B		

Jack's result for M4 in June is lower than his result for M3 in 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 (M4) + 200 (M8) = 317, Grade B awarded in June 2020.

Jack then decides to re-take the qualification, and this time he enters for M3 in January 2021, and thereafter M4 and M8 in June 2021.

His UMS results are shown in the table below:

	Assessment Unit		
	M3	M4	M8
January 2020	122 (C)		<b>200 (A)</b>
June 2020		<b>117 (C)</b> resit	
June 2020	Cash-in grade B		
January 2021	140 (B)		
June 2021		<b>162 (A)</b>	195 (A)
June 2021	Cash-in Grade A		

The two results that will be used for the final certification will be 162 (M4) and 200 (M8)

Total UMS: 162 (M4) + 200 (M8) = 362, Grade A awarded in June 2021.



### Example 8

Julie sits assessment units M3 and M7 in January 2020.

She could perform a late cash-in for January 2020 (there is a late cash-in fee for this) and she could achieve a grade B with 299 UMS.

However, Julie is disappointed with her M3 result and she decides to sit M4 in June 2020, hoping to improve her total Uniform Mark Score.

Unfortunately, she does not perform as well as expected in her attempt at M4.

Her results are shown below:

	Assessment Unit		
	M3	M4	M7
January 2020	125 (C*)		<b>174 (B)</b>
June 2020		<b>117 (C)</b>	
June 2020	Cash-in grade C*		

Julie's result for M4 in June is lower than her M3 result in 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 (M4) + 174 (M7) = 291 Grade C\* awarded in June 2020.

Julie then decides to retake the qualification, and this time she enters for M4 in January 2021.

Her results are shown below

	Assessment Unit		
	M3	M4	M7
January 2020	125 (C*)		<b>174 (B)</b>
June 2020		117 (C) resit	
June 2020	Cash-in grade C*		
January 2021		<b>148 (A)</b>	
January 2021		Cash-in grade A	

The two results that will be used for the final certification will be 174 (M7) and 148 (M4).

The UMS 174 (M7) will be counted as the result for the completion module.

The UMS 148 (M4) will fulfil the terminal rule.

Total UMS: 174 (M7) + 148 (M4) = 322, Grade A awarded in January 2021.