

## **Practice Tests Sets 1–6: Suggested Grade Boundaries**

The intention of the six sets of practice papers compiled in 2016 was to provide practice for students with 80-mark papers ramped in difficulty in line with the new GCSE papers. In the end we called them practice tests to distinguish them from papers as such – I was aware that they weren't the same as the specimen or mock papers since they were missing new-style questions and some new areas of the specifications weren't tested (e.g. frequency trees).

I used past questions from GCSE, IGCSE and GCSE Linked Pair Pilot examinations and using assessment grids information from examiners attempted make Higher tier papers which had 40 marks given over to questions targeting grades 4–6 and 40 marks given to grades 7–9. Similarly for Foundation tier, with 40 marks to grades 1–3 and 40 marks for grades 3–5.

Using past performance data for all the questions used, I could then suggest the mark a student might achieve at each grade on average and from that mark suggest grade boundaries (the average mark at any grade tends to fall pretty well at the midpoint of the two boundary marks).

Using information from past 1MA0 Higher tier papers, I set boundaries using the last 80 marks on each of the 100 mark papers to give me an upper limit of where A(7) and C(4) grade boundaries would fall and interpolated other grades from those figures.

I couldn't do the same with Foundation tier – it wasn't a case of removing the bottom 20 marks for those papers, so I had to rely on having the ramping correct.

I received a lot of feedback on the practice tests, particularly that students found them easier than the specimen and mock papers that were produced. I think that's fair; in the end, the Foundation tier grade boundaries agreed in Summer 2017 were much lower than I had anticipated. The boundaries suggested for the Foundation tier practice tests were higher because the papers were not as demanding as the 1MA1 papers students ended up sitting.

The same is true to some extent of the Higher tier practice tests; however, Higher tier Sets 2 and 6 came in closest to the grade boundaries which were eventually agreed for Summer 2017; Sets 1, 3 4 and 5 were probably a bit easier in demand overall.

Received wisdom last year was that no-one could expect to predict grade boundaries on the new specifications so I didn't make these available at the time. However, having now seen the grade boundaries from Summer 2017, I think it is reasonable to make my suggestions available with a rationale (and warning that these are only suggestions).

You can find the performance data for most of the questions attached to the end of the mark schemes and so work out how I arrived at suggestions for boundaries; there is some interpolating and educated guesswork required where performance data isn't available.

The next thing to do, of course, is to revisit the practice tests to change the ramping where required to make the difficulty of them more in line with the demand of the 1MA1 papers – that might take a little while, but I hope to make revised sets with suggested boundaries closer to those used in Summer 2017 and which should better reflect the demand. I'll also be able to use a few new questions from the Summer and November 2017 papers to help with that.

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## PRACTICE TESTS SET 1

### Set 1 1F

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	58	46	34	22	10

### Set 1 2F

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	75	60	45	30	15

### Set 1 3F

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	63	50	37	24	11

### Practice Test Set 1 Foundation overall (out of 240)

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	196	156	116	71	36

### Summer 2017 Foundation overall (out of 240)

#### Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	158	122	90	58	26

### Set 1 1H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	65	55	45	35	25	15

### Set 1 2H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	65	56	47	38	29	20

### Set 1 3H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	69	58	49	39	30	22

### Practice Test Set 1 Higher overall (out of 240)

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	199	169	141	112	84	56

**Summer 2017 Higher overall (out of 240)****Grade Boundaries 9 – 4**

	9	8	7	6	5	4	3
Mark	190	157	124	96	68	41	27

**PRACTICE TESTS SET 2****Set 2 Paper 1F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	71	64	49	33	16

**Set 2 Paper 2F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	55	48	34	19	8

**Set 2 Paper 3F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	61	48	35	22	9

**Practice Test Set 2 Foundation overall (out of 240)****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	173	147	108	67	30

**Summer 2017 Foundation overall (out of 240)****Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	158	122	90	58	26

**Set 2 Paper 1H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	60	47	36	27	18	12

**Set 2 Paper 2H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	69	58	47	36	24	14

**Set 2 Paper 3H**

**Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	61	50	39	30	21	13

**Practice Test Set 2 Higher overall (out of 240)**

**Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	190	155	122	93	63	39

**Summer 2017 Higher overall (out of 240)**

**Grade Boundaries 9 – 4**

	9	8	7	6	5	4	3
Mark	190	157	124	96	68	41	27

**PRACTICE TESTS SET 3**

**Set 3 Paper 1F**

**Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	59	52	37	22	6

**Set 3 Paper 2F**

**Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	61	55	31	28	14

**Set 3 Paper 3F**

**Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	60	54	40	29	12

**Practice Test Set 3 Foundation overall (out of 240)**

**Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	180	161	108	79	32

**Summer 2017 Foundation overall (out of 240)**

**Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	158	122	90	58	26

**Set 3 Paper 1H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	63	53	43	33	24	16

**Set 3 Paper 2H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	64	54	40	32	23	17

**Set 3 Paper 3H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	72	61	50	39	29	19

**Practice Test Set 3 Higher overall (out of 240)****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	199	168	137	106	77	51

**Summer 2017 Higher overall (out of 240)****Grade Boundaries 9 – 4**

	9	8	7	6	5	4	3
Mark	190	157	124	96	68	41	27

**PRACTICE TESTS SET 4****Set 4 Paper 1F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	60	49	38	27	16

**Set 4 Paper 2F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	69	55	41	29	13

**Set 4 Paper 3F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	60	50	40	30	20

**Practice Test Set 4 Foundation overall (out of 240)****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	189	154	119	84	49

**Summer 2017 Foundation overall (out of 240)****Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	158	122	90	58	26

**Set 4 Paper 1H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	63	55	43	33	23	14

**Set 4 Paper 2H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	64	56	43	33	23	14

**Set 4 Paper 3H****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	69	58	47	36	26	17

**Practice Test Set 4 Higher overall (out of 240)****Suggested Grade Boundaries 9 – 4**

	9	8	7	6	5	4
Mark	196	169	135	105	75	48

**Summer 2017 Higher overall (out of 240)****Grade Boundaries 9 – 4**

	9	8	7	6	5	4	3
Mark	190	157	124	96	68	41	27

**PRACTICE TESTS SET 5****Set 5 Paper 1F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
Mark	61	48	37	24	10

**Set 5 Paper 2F****Suggested Grade Boundaries 5 – 1**

	5	4	3	2	1
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### Set 5 Paper 3F

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	60	48	36	21	7

### Practice Test Set 5 Foundation overall (out of 240)

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	183	145	120	70	28

### Summer 2017 Foundation overall (out of 240)

#### Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	158	122	90	58	26

### Set 5 Paper 1H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	66	53	43	35	28	20

### Set 5 Paper 2H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	66	55	44	34	23	12

### Set 5 Paper 3H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	67	57	46	35	25	16

### Practice Test Set 5 Higher overall (out of 240)

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	199	165	133	104	76	48

### Summer 2017 Higher overall (out of 240)

#### Grade Boundaries 9 – 4

	9	8	7	6	5	4	3
Mark	190	157	124	96	68	41	27

## PRACTICE TESTS SET 6

### Set 6 Paper 1F

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	60	47	34	21	13

### Set 6 Paper 2F

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	60	47	32	21	9

### Set 6 Paper 3F

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	58	45	30	20	8

### Practice Test Set 6 Foundation overall (out of 240)

#### Suggested Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	178	139	96	62	30

### Summer 2017 Foundation overall (out of 240)

#### Grade Boundaries 5 – 1

	5	4	3	2	1
Mark	158	122	90	58	26

### Set 6 Paper 1H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	64	54	44	34	24	15

### Set 6 Paper 2H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	61	51	41	31	21	12

### Set 6 Paper 3H

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	55	46	37	28	19	11

### Practice Test Set 6 Higher overall (out of 240)

#### Suggested Grade Boundaries 9 – 4

	9	8	7	6	5	4
Mark	180	151	122	93	64	38



## Summer 2017 Higher overall (out of 240)

### Grade Boundaries 9 – 4

	9	8	7	6	5	4	3
Mark	190	157	124	96	68	41	27

1MA1 practice tests suggested grade boundaries (Sets 1-6)