

GCSE Mathematics (1MA1) – Achieving a Grade 2 1F

Student-friendly mark scheme

Please note that this mark scheme is not the one used by examiners for making scripts. It is intended more as a guide to good practice, indicating where marks are given for correct answers. As such, it doesn't show follow-through marks (marks that are awarded despite errors being made) or special cases.

It should also be noted that for many questions, there may be alternative methods of finding correct solutions that are not shown here – they will be covered in the formal mark scheme.

NOTES ON MARKING PRINCIPLES

Guidance on the use of codes within this mark scheme

M1 – method mark. This mark is generally given for an appropriate method in the context of the question. This mark is given for showing your working and may be awarded even if working is incorrect.

P1 – process mark. This mark is generally given for setting up an appropriate process to find a solution in the context of the question.

A1 – accuracy mark. This mark is generally given for a correct answer following correct working.

B1 – working mark. This mark is usually given when working and the answer cannot easily be separated.

C1 – communication mark. This mark is given for explaining your answer or giving a conclusion in context supported by your working.

Some questions require all working to be shown; in such questions, no marks will be given for an answer with no working (even if it is a correct answer).

Question 1 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$-15 + 42$	M1	This mark is given for a method to find the highest temperature
	27	A1	This mark is given for the correct answer only

Question 2 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$6 \times 4 = 24$	M1	This mark is given for a method to work out the value of y using a correct substitution
	$24 - 5 = 19$	A1	This mark is given for the correct answer only

Question 3 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$25 \div 10 = 2.5$ or $40 \div 10 = 4$	M1	This mark is given for a method to find out how much sugar Mia needs
	$2.5 \times 40 = 100$ or $4 \times 25 = 100$	A1	This mark is given for the correct answer only

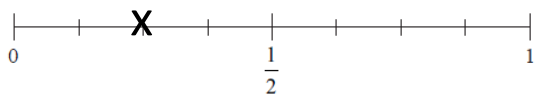
Question 4 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$4e$	B1	This mark is given for the correct answer only

Question 5 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$45\% = 0.45$ and $\frac{1}{2} = 0.50$ $45\%, \frac{1}{2}, 0.55$	B1	This mark is given for the correct answer only

Question 6 (Total 3 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(i)		B1	This mark is given for the correct answer only
(ii)	$\frac{1}{8}$	B1	This mark is given for the correct answer only

Question 7 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	$\frac{4}{15}$	B1	This mark is given for a correct answer only (accept as a decimal or a percentage)
(b)	$1 - 0.3 = 0.7$	B1	This mark is given for a correct answer only (accept as a decimal or a percentage)

Question 8 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$1 - \frac{30}{100}$	M1	This mark is given for a method to find the probability the counter is not blue
	$\frac{70}{100}$	A1	This mark is given for a correct answer only (or an equivalent fraction)

Question 9 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$15tw$	B1	This mark is given for a correct answer only (might be $15wt$)

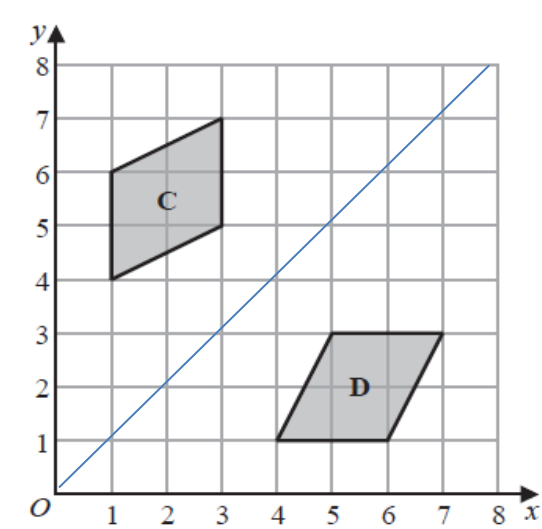
Question 10 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$40 \times 10 = 400$	B1	This mark is given for the correct answer only

Question 11 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$360 - 70 = 290$	B1	This mark is given for the correct answer only

Question 12 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
		B1	This mark is given for the line $y = x$ correctly drawn

Question 13 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	For example: Half a square is worth 2.5 It goes to 17.5	C1	This mark is given for a correct explanation

Question 14 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$\frac{12}{72} = \frac{1}{6}$	M1	This mark is given for a method to find the probability (for example, $\frac{a}{72}$ where $0 < a < 72$ or $\frac{12}{b}$ where $b > 12$ and b is an integer)
		A1	This mark is given for a correct answer only (or an equivalent fraction)

Question 15 (Total 3 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes								
	<table style="border-collapse: collapse; margin: auto;"> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">1</td><td style="padding: 2px 5px;">7 9</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">2</td><td style="padding: 2px 5px;">5 5 6 7 7 7 8 9</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">3</td><td style="padding: 2px 5px;">3 7 7</td></tr> <tr><td style="border-right: 1px solid black; padding: 2px 5px;">4</td><td style="padding: 2px 5px;">5 7</td></tr> </table>	1	7 9	2	5 5 6 7 7 7 8 9	3	3 7 7	4	5 7	B2	These marks are given for a fully correct ordered diagram (B1 is give for a correct unordered diagram or an ordered diagram with one error or omission)
1	7 9										
2	5 5 6 7 7 7 8 9										
3	3 7 7										
4	5 7										
	Key: 2 5 is 25	B1	This mark is given for a correct key								

Question 16 (Total 1 mark)

Part	Working an or answer examiner might expect to see	Mark	Notes
(b)	$210 - 160 = 50$	B1	This mark is given for the correct answer only

Question 17 (Total 3 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	$23 \div 4 = 5.75$	M1	This mark is given for a method to find the greatest number of jars of coffee Michael can buy
	5	A1	This mark is given for the correct answer only
(b)	Michael is incorrect For example: $23 \div 2 = 11.5$, so Michael can buy 11 jars	C1	This mark is given for a valid answer support by correct reasoning

Question 18 (Total 3 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$240 \times 0.2 = 48$	M1	This mark is given for the first step in a method to find the increase
	$240 + 48$	M1	This mark is given for the second step in a method to find the increase
	288	A1	This mark is given for the correct answer only

1MA1 – Aiming for Grade 2 1F
Edexcel averages: mean scores of students who achieved grade

Qn	Skill tested	Mean score	Max score	Mean %	Edexcel averages: mean scores of students who achieved grade						
					ALL	5	4	3	2	1	U
1	Four operations	1.53	2	77	1.53	1.91	1.81	1.64	1.38	0.95	0.50
2	Substitutions	1.53	2	77	1.53	1.97	1.91	1.75	1.35	0.66	0.24
3	Direct proportion - recipes	1.52	2	76	1.52	1.94	1.85	1.66	1.33	0.87	0.45
4	Simplify expressions	0.73	1	73	0.73	0.90	0.81	0.73	0.66	0.61	0.51
5	Order numbers	0.76	1	76	0.76	0.98	0.94	0.85	0.66	0.38	0.19
6i	Probability Scale	0.74	1	74	0.74	0.96	0.87	0.77	0.63	0.41	0.34
6ii	Probability Scale	0.71	1	71	0.71	0.93	0.83	0.73	0.62	0.48	0.44
7a	Theoretical probability	0.72	1	72	0.72	0.97	0.90	0.79	0.61	0.36	0.16
7b	Theoretical probability	0.74	1	74	0.74	0.99	0.96	0.85	0.61	0.29	0.13
8	Probability sum to 1	1.48	2	74	1.48	1.90	1.76	1.56	1.21	0.83	0.60
9	Algebraic manipulation	0.64	1	64	0.64	0.83	0.70	0.64	0.60	0.52	0.37
10	Metric conversions	0.67	1	67	0.67	0.87	0.77	0.67	0.59	0.49	0.32
11	Properties of angles	0.73	1	73	0.73	0.96	0.88	0.77	0.59	0.40	0.36
12	Transformations	0.61	1	61	0.61	0.88	0.75	0.63	0.50	0.37	0.34
13	Bar charts	0.58	1	58	0.58	0.83	0.72	0.60	0.47	0.31	0.16
14	Reading frequency trees	1.13	2	56	1.13	1.59	1.45	1.25	0.93	0.45	0.14
15	Stem and leaf diagrams	1.85	3	62	1.85	2.75	2.46	2.00	1.39	0.70	0.23
16	Bar charts	0.58	1	58	0.58	0.90	0.76	0.60	0.44	0.30	0.30
17a	Apply four operations	1.87	2	94	1.87	1.97	1.94	1.90	1.83	1.64	1.51
17b	Apply four operations	0.54	1	54	0.54	0.82	0.67	0.55	0.43	0.30	0.32
18	Percentages	1.93	3	64	1.93	2.91	2.74	2.24	1.24	0.42	0.16
		21.59	31.00	69	21.59	28.76	26.48	23.18	18.07	11.74	7.77