GCSE Mathematics (1MA1) – Aiming for 4 Paper 1F(A) (Set 4)

Spring 2022 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 1 mark)

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

Question 2 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	The bar for brown has a frequency of 16, not 15	C1	This mark is given for a correct error identified

Question 3 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$42 \div 3$	M1	This mark is given for a method to find the amount each friend gets
	14	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
	5	B1	This mark is given for the correct answer only

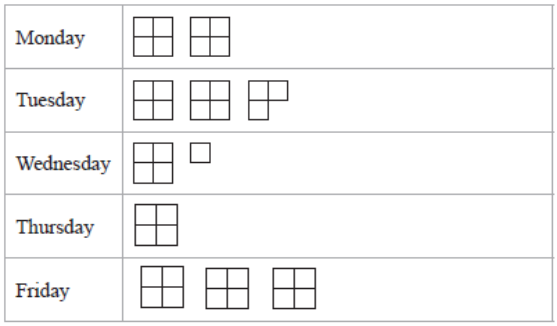
Question 5 (Total 1 mark)

Part	Working an or answer examiner might expect to see	Mark	Notes
	330	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
	$1.20 + 0.70 + (2 \times 2.30) = 6.50$	P1	This mark is given for a process to find the total of Danny's purchases
	$10.00 - 6.50 = 3.50$	P1	This mark is given for a process to find the correct change from £10
	Danny is not correct; he should receive 3.50 in change	A1	This mark is given for a correct conclusion supported by correct working

Question 7 (Total 6 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	16	B1	This mark is given for the correct answer only
(b)	$(8 + 8 + 6) - (8 + 2) = 22 - 10$	M1	This mark is given for a method to find how many more video games were sold
	12	A1	This mark is given for the correct answer only
(c)	$\frac{1}{4} \times 32 = 8$	P1	This mark is given for a process to find the number of video games sold on Thursday
		A1	This mark is given for a correct entry in the pictogram for Thursday
		A1	This mark is given for a correct entry in the pictogram for Friday

Question 8 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$7 \times 7 = 49$	B1	This mark is given for the correct answer only

Question 9 (Total 1 mark)

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

Question 10 (Total 1 mark)

Part	Working or answer an examiner might expect to see	Mark	Notes
	700	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
	0.309, 0.32, 0.35, 0.4	B1	This mark is given for the correct answer only

Question 12 (Total 1 mark)

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

Question 13 (Total 4 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	Temperature on Tuesday = 5 – 10 = –5 Temperature on Wednesday = –5 + 3 = –2	M1	This mark is given for a process to work out the temperatures on Tuesday and Wednesday
	The difference between the temperatures on Monday and Wednesday = 5 – (–2) = 7	A1	This mark is given for the correct answer only

Question 14 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	Trapezium	B1	This mark is given for the correct answer only
(b)	Cylinder	B1	This mark is given for the correct answer only

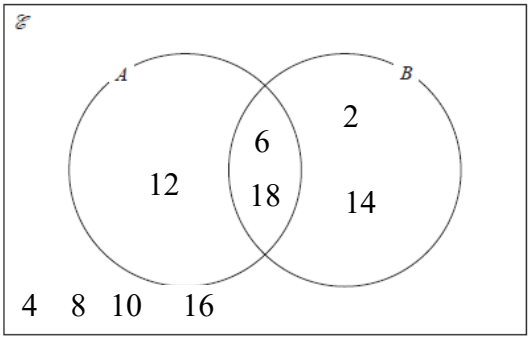
Question 15 (Total 4 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	1 kg of carrots = $1.80 \div 3 = 0.60$	P1	This mark is given for a process to find the cost of 1 kg of carrots
	5 kg of potatoes = $3.45 - 1.20 = 2.25$	P1	This mark is given for a process to find the cost of 5 kg of potatoes
	4 kg of carrots + 2 kg of potatoes $= (0.60 \times 4) + (2.25 \div 5) \times 2$ $= 2.40 + 0.90$	P1	This mark is given for a process to find the cost of 4 kg of carrots and 2 kg of potatoes
	$= 3.30$	A1	This mark is given for a fully correct answer

Question 16 (Total 4 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	$2a + 2d$	B1	This mark is given for the correct answer only
(b)	$y(6y - 5)$	B1	This mark is given for the correct answer only
(c)	$4x = 44$	M1	This mark is given for a method to find a solution for x
	$x = 11$	A1	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
		M1	This mark is given for 6 and 18 correctly placed
		M1	This mark is given for 2 and 14 correctly placed
		C1	This mark is given for a fully correct Venn diagram

Question 18 (Total 2 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	For example: the number of points only goes up by 4	C1	This mark is given for a correct explanation
(b)	For example: $0 \times 1 = 0$ (not 1)	C1	This mark is given for a correct explanation

Question 19 (Total 3 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
	$80 - 56 = 24$	P1	This mark is given finding the loss (in £) selling the watch
	$\frac{24}{80} \times 100$	P1	This mark is given for a process to find the percentage loss
	30	A1	This mark is given for the correct answer only

Aiming for 4 - Paper 1F(A)					Edexcel averages: mean scores of students who achieved grade						
Qn	**Skill tested**	**Mean score**	**Max score**	**Mean %**	**ALL**	**5**	**4**	**3**	**2**	**1**	**U**
1	Primes, factors, multiples	0.96	1	96	0.96	0.99	0.99	0.98	0.95	0.87	0.77
2	Bar charts	0.94	1	94	0.94	0.97	0.97	0.96	0.94	0.91	0.87
3	Apply four operations	1.84	2	92	1.84	1.97	1.96	1.92	1.81	1.57	1.23
4	Rounding; Inequality notation to specify error interval	0.89	1	89	0.89	0.98	0.97	0.94	0.82	0.64	0.48
5	Approximation and estimation	0.86	1	86	0.86	0.95	0.94	0.90	0.83	0.75	0.68
6	Apply four operations	2.47	3	82	2.47	2.87	2.75	2.62	2.36	1.99	1.71
7	Pictograms	4.85	6	81	4.85	5.66	5.57	5.27	4.54	3.56	3.00
8	Roots and powers	0.80	1	80	0.80	0.98	0.93	0.87	0.75	0.59	0.42
9	Conversion between fractions, decimals and percentages	0.78	1	78	0.78	0.94	0.88	0.80	0.74	0.71	0.60
10	Apply four operations	0.75	1	75	0.75	0.86	0.82	0.77	0.70	0.57	0.42
11	Order numbers	0.72	1	72	0.72	0.96	0.89	0.77	0.58	0.41	0.26
12	Conversion between fractions, decimals and percentages	0.66	1	66	0.66	0.93	0.85	0.72	0.47	0.29	0.14
13	Apply four operations	1.26	2	63	1.26	1.75	1.58	1.40	1.13	0.80	0.59
14	Conventional geometrical terms and notation	1.16	2	58	1.16	1.61	1.38	1.24	1.08	0.86	0.72
15	Solve problems involving direct and inverse proportion	2.21	4	55	2.21	3.69	3.33	2.67	1.66	0.93	0.63
16	Solve linear equations	1.99	4	50	1.99	3.46	2.94	2.34	1.56	0.87	0.55
17	Enumerate sets and combinations of sets systematically; two-way tables, Venn diagrams and tree diagrams	1.45	3	48	1.45	2.39	2.02	1.65	1.21	0.85	0.56
18	Frequency tables	0.88	2	44	0.88	1.38	1.19	0.94	0.63	0.42	0.22
19	Percentages and problems involving percentage change	1.29	3	43	1.29	2.57	1.93	1.39	1.04	0.86	0.68
		26.76	**40**	**68**	**26.76**	**35.91**	**32.89**	**29.15**	**23.80**	**18.45**	**14.53**

Aiming for 4 – Set 4 (A) (Spring 2022)

Suggested grade boundaries

	Max	5	4	3	2	1
1F(A)	40	34	31	26	21	16
2F(A)	40	33	32	27	21	13
3F(A)	40	34	31	27	21	14
Total	**120**	**101**	**94**	**80**	**63**	**43**

Grade boundaries are based on the average performance data for students answering these questions who gained grades 1-5 in the November 2020 & 2021 GCSE Mathematics examinations at Foundation tier.

Students did not answer these questions as 45-minute tests, of course; so there is some scope for adjustment. These boundaries are for guidance only.