



Pearson

Mark Scheme

Mock Set 2

Pearson Edexcel GCSE Mathematics (1MA1)
Foundation Tier (Non-Calculator)
Paper 1F

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General marking guidance

These notes offer general guidance, but the specific notes for examiners appertaining to individual questions take precedence.

- 1** All candidates must receive the same treatment. Examiners must mark the last candidate in exactly the same way as they mark the first.

Where some judgement is required, mark schemes will provide the principles by which marks will be awarded; exemplification/indicative content will not be exhaustive. When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the response should be sent to review.

- 2** All the marks on the mark scheme are designed to be awarded; mark schemes should be applied positively. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme. If there is a wrong answer (or no answer) indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.

Questions where working is not required: In general, the correct answer should be given full marks.

Questions that specifically require working: In general, candidates who do not show working on this type of question will get no marks – full details will be given in the mark scheme for each individual question.

- 3** **Crossed out work**

This should be marked **unless** the candidate has replaced it with an alternative response.

- 4** **Choice of method**

If there is a choice of methods shown, mark the method that leads to the answer given on the answer line.

If no answer appears on the answer line, mark both methods **then award the lower number of marks.**

- 5** **Incorrect method**

If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks. Send the response to review for your Team Leader to check.

6 Follow through marks

Follow through marks which involve a single stage calculation can be awarded without working as you can check the answer, but if ambiguous do not award.

Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

7 Ignoring subsequent work

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question or its context. (eg. an incorrectly cancelled fraction when the unsimplified fraction would gain full marks).

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect (eg. incorrect algebraic simplification).

8 Probability

Probability answers must be given as a fraction, percentage or decimal. If a candidate gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths).

Incorrect notation should lose the accuracy marks, but be awarded any implied method marks.

If a probability answer is given on the answer line using both incorrect and correct notation, award the marks.

If a probability fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.

9 Linear equations

Unless indicated otherwise in the mark scheme, full marks can be gained if the solution alone is given on the answer line, or otherwise unambiguously identified in working (without contradiction elsewhere). Where the correct solution only is shown substituted, but not identified as the solution, the accuracy mark is lost but any method marks can be awarded (embedded answers).

10 Range of answers

Unless otherwise stated, when an answer is given as a range (e.g 3.5 – 4.2) then this is inclusive of the end points (e.g 3.5, 4.2) and all numbers within the range.

Guidance on the use of abbreviations within this mark scheme

M	method mark awarded for a correct method or partial method
P	process mark awarded for a correct process as part of a problem solving question
A	accuracy mark (awarded after a correct method or process; if no method or process is seen then full marks for the question are implied but see individual mark schemes for more details)
C	communication mark
B	unconditional accuracy mark (no method needed)
oe	or equivalent
cao	correct answer only
ft	follow through (when appropriate as per mark scheme)
sc	special case
dep	dependent (on a previous mark)
indep	independent
awrt	answer which rounds to
isw	ignore subsequent working

Foundation tier Paper 1F (Non-calculator): Mock (Set 2) Mark Scheme

Question	Working	Answer	Mark	Notes
1 (a)		-10, -7, -5, 0 ,4	B1	cao
(b)		0.2, 0.205, 0.25, 0.52	B1	cao
2		70	B1	cao
3		5.55	B1	cao
4		210	B1	cao
5		33	B1	cao
6		statement	C1	e.g. no labels on horizontal axis
		statement	C1	e.g. no 0 on vertical axis
		statement	C1	e.g. middle column incorrect height
7 (a)		15	M1 A1	for method to find rate of pay, e.g. $120 \div 8$ cao
(b)		110	M1 M1 A1	for method to find total for last 3 days, e.g. $550 - (120 + 100) (= 330)$ shows the need to find the amount for one day (e.g. $\div 3$) cao

8	(a)		example	B1	e.g. $3 + 8 = 11$
	(b)		example	B1	e.g. $2 \times 7 = 14$
	(c)		example	B1	e.g. $9 \times 9 = 81$
9			Decor U	P1	for process to find an area as a first step, e.g. $4 \times 9 (= 36)$
				P1	(dep P1) for process to find the number of tins for one store, e.g. $36 \div 12$ (3 tins) or $36 \div 10$ (4 tins)
				P1	for process to find the costs for both, e.g. “3” \times £3.70 and “4” \times £3 where the number of tins (“3” or “4”) is an integer
				A1	states Decor U and giving costs as 11.10 and 12
10	(a)		5	B1	cao
	(b)		7	M1	starts to find number using inverse operations (oe), e.g. use of $\div 2$ or $+ 3$
				A1	cao
	(c)		3	M1	starts to find the number by using inverse operations with own values or algebraic expressions, e.g. use of $\div 2$ and $+ 3$; e.g. $2x - 3$
				A1	cao
11	(a)		1300	B1	cao
	(b)		4 - 5	B1	
	(c)		1.4	M1	for taking readings from graph, e.g. 0.6 or 2 or finds the difference from their readings

			A1	cao
(d)		graph	B1	for showing a horizontal line from (13 40, 3.5) to (13 50, 3.5)
			B1	for a line that terminates at (14 15,0) and starts from (13 50, 3.5) or starts from the end of their graph so far, e.g. from (13 40, 3.5)
12	(a)	£630	P1	uses some estimation, e.g. states 90 or 700 or 800 or 100
			P1	starts process of multiplication using estimates, e.g. 90×700
			A1	cao accept 63000p
	(b)	reasoning	C1	gives an answer based on their calculations, e.g. over-estimate since figures have been rounded up
13		5 : 6	M1	starts by writing as a ratio, e.g. 100 : 120 or gives the simplified answer incorrectly, e.g. 6 : 5; 5,6
			A1	cao
14		0.9	M1	starts method by multiplying rates by freq., e.g. 0×15 , 1×8 , 2×3 etc. or sight of at least three of 0,8,6,9,4 (could be next to table)
			M1	(dep M1) shows $\sum fx \div \sum f$, e.g. $27 \div 30$
			A1	cao SC B2 for 1.4
15		160	P1	process to find the cost of paprika, e.g. $210 \div 7 (= 30)$
			P1	process to find the cost of sage, e.g. $(290 - (3 \times (210 \div 7))) \div 4 (= 50)$

			P1	(dep P2) process to find the required cost , e.g. $2 \times "30" + 2 \times "50"$ or $2 \times ("30" + "50")$
			A1	cao
16	(a)	23.6	P1	shows a start to the process, e.g. finds the area of the base (e.g. $50 \times 100 = 5000$) or shows the volume as 300 000 or $100 \times 50 \times h = 18000$
			P1	shows a process to find the depth, e.g. dividing 18000 by the base area, e.g. $18000 \div (50 \times 100)$ or an equivalent method to find the depth (= 3.6)
			P1	process to find 1/3 of 60 or 1/3 of a volume, e.g. $60 \div 3 (= 20)$
			A1	cao
	(b)	less	C1	explanation that the depth of water will be less
17	(a)	3 in Q 6 in middle	B1	the figure 3 is correctly placed
			B1	the figure 6 is correctly placed
	(b)	$\frac{7}{11}$	M1	for writing $7/a$ ($a \neq 11, a > 7$) or $b/11$ ($b \neq 7, b < 11$) (ft)
			A1	for 7/11 (cao or ft from their Venn diagram) oe
18		Ali 80 Beth 200	M1	starts with a first step , e.g. $280 \div (2 + 5) (= 40)$
			A1	cao
19		71°	M1	finds an angle using parallel lines, e.g. BEF as 38° or EAB as x .
			M1	shows a complete process to arrive at the required angle

			A1	could be evidenced by angles shown on the diagram
			A1	cao
			C1	<u>alternate</u> , <u>corresponding</u> or <u>allied (co-interior)</u> unambiguously given <i>and appropriate for their working</i>
			C1	all other reasons given, e.g. <u>Angles</u> on a <u>straight line</u> add up to <u>180</u> , <u>Angles</u> in a <u>triangle</u> add up to <u>180</u> , Base <u>angles</u> of an <u>isosceles</u> triangle are <u>equal</u> <i>and appropriate for their working</i>
20		$3x + 1$	P1	process to start to problem, e.g. states perimeter algebraically, e.g. $2x + 3 + 5x - 2 + 5x + 3$
			P1	(dep P1) continues process, e.g. simplifies to $12x + 4$ or divides their linear expression (linked to perimeter) by 4
			A1	cao
21		No with correct figures	P1	starts process e.g. starts to find volume by showing how to find a prism which is part of the shape, or shows how to find the complete cross-sectional area, e.g. $(1 \times 10 \times 10)$ or $(\frac{1}{2} \times 2 \times 5) + (1 \times 15)$ (= 20)
			P1	(dep P1) complete process shown to find the vol of the pool (= 200 m ³)
			P1	process to convert between litres and cm ³ , e.g. $1 \text{ cm}^3 = 100 \text{ 000 litres}$ or 200 000 litres
			A1	time taken, e.g. 40 000 sec, 666.66.. minutes, 11.11.. hours
			C1	comparison with correct comparable figures used, e.g. $36 \text{ 000} < 40 \text{ 000}$, $600 < 666.66\dots$, or 11.11... (10 given)
22	(a)	20	M1	for complete proportion statement, e.g. $12 \times 5 \div 3$ oe

			A1	cao
(b)i		statement	C1	eg work rate of each man is the same / does not change over time
ii		statement	C1	eg if rate slower it takes longer / rate faster takes less time ie needs to refer to how the rate changes
23	(a)	complete tree diagram	B1 B1	1/6, 5/6 shown on left hand branches, 1/8, 7/8, 1/8, 7/8 shown on right hand branches
	(b)	$\frac{35}{48}$	M1 A1	$\frac{5}{6} \times \frac{7}{8}$ oe (or ft their tree diagram, dep on having probabilities shown) oe (or ft tree diagram, dep on having probabilities shown)
24	(a)	66	B1	cao
	(b)	77	B1	cao
25		8×10^4	B1	cao