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EDEXCEL · GCSE MATHEMATICS 1MA1

Foundation Tier — Paper 2

Calculator

November 2024 exam series

MARK SCHEME

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Pearson

Mark Scheme (Results)

November 2024

Pearson Edexcel GCSE
In Mathematics (1MA1)
Foundation (Calculator) Paper 2F

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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 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.

11 Number in brackets after a calculation

Where there is a number in brackets after a calculation E.g. 2 × 6 (=12) then the mark can be awarded **either** for the correct method, implied by the calculation **or** for the correct answer to the calculation.

12 Use of inverted commas

Some numbers in the mark scheme will appear inside inverted commas E.g. "12" × 50 ; the number in inverted commas cannot be any number – it must come from a correct method or process but the candidate may make an arithmetic error in their working.

13 Word in square brackets

Where a word is used in square brackets E.g. [area] × 1.5 : the value used for [area] does **not** have to come from a correct method or process but is the value that the candidate believes is the area. If there are any constraints on the value that can be used, details will be given in the mark scheme.

14 Misread

If a candidate misreads a number from the question. Eg. uses 252 instead of 255; method or process marks may be awarded provided the question has not been simplified. Examiners should send any instance of a suspected misread to review.

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

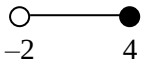
Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
1	$\frac{17}{100}$	B1	for $\frac{17}{100}$ or any other equivalent fraction	
2	2 hours 20 minutes	B1	cao	
3	0.05, 0.5, 0.507, 0.57	B1	for 0.05, 0.5, 0.507, 0.57	Accept reverse order
4	hexagon	B1	cao	
5	3	B1	cao	
6	10	P1 P1 A1	for process to find greatest number of bracelets for one colour, eg 52 ÷ 5 (= 10(.4)) **or** 80 ÷ 7 (= 11(.4..)) for process to find greatest number of bracelets for both colours, eg 52 ÷ 5 (= 10(.4)) **and** 80 ÷ 7 (= 11(.4..)) cao	May be seen as a repeated addition or subtraction but must be complete for one colour, eg 50 or 70 May be implied by eg 50:70 or 50:77 Must see working with both colours for this mark.
7 (a)	12	M1 A1	for method to find mean, eg (14 + 10 + 10 + 13 + 15 + 9 + 15 + 10) ÷ 8 **or** 96 ÷ 8 cao	Allow one error or omission but must divide by 8
(b)	6	M1 A1	for 15 – 9 **or** 9 – 15 **or** 9 to 15 cao	Condone eg 9, 15 but not 9 + 15
(c)	cross at ¼	B1	for cross (or mark) at ¼	Accept any mark near to ¼ if the intention is clear; do not accept if additional marks are shown

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
8 (a)	No and reason	C1	No **and** reason **Acceptable examples** No, because $10^2 = 100$ **or** 10^2 is 10×10 $4^2 = 16$ and $5^2 = 25$ so 20 is not a square number Junaid is wrong because $\sqrt{20} \neq 10$ **or** $\sqrt{20} = 4.47...$ Incorrect because 20 is 2×10 not 10×10 No she multiplied by 2 instead of squaring **or** 10^2 is not 10×2 Wrong as she added instead of multiplying **Not acceptable examples** Yes…. No because 20 is 10×2 Incorrect because 20 is not a square number No because 10^2 is not 20 No because she added No because a square number is when a number is multiplied by itself	
(b)	example	C1	for a correctly evaluated example, eg $12 \div 4 = 3$ or $10 \div 2 = 5$ or $2 \div 4 = 0.5$	Accept rounded and truncated values, eg $2 \div 6 = 0.3(..)$, $100 \div 6 = 16.6(..)$
9	3 : 5	M1	for 90 : 150 oe ratio **or** 5 : 3	eg 30 : 50, 15: 25, 9 : 15
		A1	cao	Accept 3 : 5 in the form n : 1, eg 0.6 : 1 **or** 1 : n, eg 1 : 1.66(…)

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
10	120	P1 P1 A1	for process to work with length, eg 40 ÷ 4 (= 10) **or** 40 × 5 (= 200) **or** 40 ÷ 4 × 3 (= 30) **or** 40 × 4 (= 160) for process to work with perimeter, eg "10" × 12 **or** [square side length] × 12 **or** [square side length] × 11 **or** "200" – 2 × 40 **or** "30" × 4 oe **or** "160" – 40 cao	May be shown on the diagram [square side length] is what they clearly think is the length of one side of the square.
11 (a)	$6xy$	B1	cao	
(b)	$5d - 3e$	M1 A1	for $5d$ **or** $-3e$ for $5d - 3e$	An answer of $5d + -3e$ scores M1 A0
12	15	P1 P1 P1 A1	for process to find number of child tickets, eg 180 ÷ 100 × 60 (= 108) oe for process to find total cost of child tickets, eg "108" × 8 (= 864) **or** [108] × 8 **OR** for process to find number of adult tickets, eg 180 – [108] (= 72) or 180 ÷ 5 × 2 (= 72) oe or $180 \times \frac{100-60}{100}$ for a complete process, eg (1944 – "864") ÷ "72" **or** (1944 – [108] × 8) ÷ (180 − [108]) cao	 Where [108] is what they clearly think is 60% of 180 but can't be greater than 180

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
13	Shown	M1	for a method leading to the evaluation of another angle, (*BAC* =) 360 – 310 (= 50) **or** (*ACB* =) 180 – 115 (= 65)	Angles may be seen on diagram
		M1	for a method to find at least 2 angles, eg (*BAC* =) 360 – 310 (= 50) **and** (*ACB* =) 180 – 115 (= 65)	
		C2	(dep M2) *CBA* = 65° **and** statement **and** appropriate angle reasons, eg statement *ACB* = *CBA* (= 65°) **or** two angles are equal (so it is isosceles) **and** angles at a point add up to 360, angles on a straight line add up to 180, angles in a triangle add up to 180, **OR** (dep M2) *CBA* = 65° **and** statement **and** appropriate angle reasons, eg statement *ACB* = *CBA* (= 65°) **or** two angles are equal (so it is isosceles) **and** the exterior angle of a triangle is equal to the sum of the interior opposite angles **and** angles on a straight line add up to 180 **or** angles in a triangle add up to 180	Underlined words need to be shown; reasons need to be linked to their method.
		(C1	(dep on M1) for any one appropriate reason related to method shown)	
14 (a)	2	B1	cao	
(b)	Graph completed	M1	for straight line from (3, 5) to (5, 5) **or** for a straight line from (5, 5) to (6 30, 0) **or** line drawn from (3, 5) to (4 30, 0) **or** a line drawn from (x, 5) to (x + 1 30, 0) where $x \geq 3$	Accept hand drawn, ruler not required but intention clear
		A1	cao	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
15	3.5	M1	for a correct first step, eg $14 \times 25\,000$ (= 350 000) **or** digits 14 × digits 25 **or** $25\,000 \div 100\,000$ (= 0.25) oe **or** $14 \div 100\,000$ (= 0.00014) **or** [distance] ÷ 100 000	[distance] is any calculated value using digits 14 and digits 25
		M1	for a complete method, eg "350 000" ÷ 100 000 oe **or** "0.25" × 14 **or** "0.00014" × 25 000	
		A1	for 3.5 oe	
16	Box B and correct figures	P1	for process to find one probability or proportion, eg $\frac{10}{10+30}\left(=\frac{10}{40}\right)$ **or** $\frac{7}{7+18}\left(=\frac{7}{25}\right)$	Accept 10 : 30 or 7 : 18
		P1	(dep P1) for process to find figures to compare using a common format, eg $10 \div [40]$ (= 0.25) **and** $7 \div [25]$ (= 0.28) **or** $10 \div [40] \times 100$ (= 25) **and** $7 \div [25] \times 100$ (= 28) **or** $\frac{10}{[40]} = \frac{25}{100}$ oe **and** $\frac{7}{[25]} = \frac{28}{100}$ oe **or** $\frac{10 \div 10}{[40] \div 10}\left(=\frac{1}{4}\right)$ **and** $\frac{7 \div 7}{[25] \div 7}\left(=\frac{1}{3.57...}\right)$	Accept eg 30 : 90 **and** 35 : 90 [40] is any value >10 [25] is any value >7 but one probability or proportion must be correct from previous P1
		C1	(dep on P2) for Box B **and** correct comparative figures, eg 0.25 and 0.28 **or** 25% and 28%	Comparative figures may be probabilities, ratios or comparative proportions eg box A: 70R and 210G and box B: 70R and 180G

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
17 (a)	265.05	M1	for 285 × (7 ÷ 100) (= 19.95) oe **or** (100 – 7) ÷ 100 (= 0.93)	
		M1	for 285 – "19.95" **or** 285 × "0.93" oe	
		A1	cao	Accept £265.05p
(b)	8000	P1	for start of process, eg 2100 – 1700 (= 400)	
		P1	for using "400" = 5%, eg (1% =) "400" ÷ 5 (= 80) or (10% =) "400" × 2 (= 800) or (50% =) "400" × 10 (= 4000) **or** "400" ÷ 5 × 100	
		A1	cao	
18	enlargement, scale factor 2, centre (0, 0)	B2	enlargement, scale factor 2, centre (0, 0)	Award no marks if more than one transformation is given
		(B1	for 2 correct aspects)	
19 (a)	$5w(3w – 1)$	B2	for $5w(3w – 1)$	
		(B1	for $5(3w^2 – w)$ **or** $w(15w – 5)$ **or** $5w(aw – b)$ where a and b are integers or $(3w – 1)$ as a factor)	
(b)		M1	for drawing a line from –2 to 4 or for an open circle at –2 or for a closed circle at 4	
		A1	cao	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
20	4.643(069317)	M1	for 192.6 **or** 8.934 **or** 21.558(09268) **or** answer of 4.64 **or** digits 4643…	
		A1	for 4.643(069317)	Answer must be given to at least 3 decimal places rounded or truncated Check first 3 decimal places only If given to 3 dp or better ignore subsequent rounding
21 (a)	positive	C1	cao	Ignore any description of a relationship and any reference to strength of correlation
(b)	lobf drawn	C1	for straight line passing between (140, 20) and (140, 22.5) and between (220, 30) and (220, 32.5)	
(c)	26.5 to 29.5	C1	for answer in range 26.5 – 29.5 **or** ft single line with positive gradient	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
22	Zurich (supported)	P1	for one process to compare, eg eg Currency conversion, 3.5 × 1.25 (= 4.375) **or** 7.20 ÷ 1.25 (= 5.76) **or** finds 1g in one place £3.50 ÷ 200 (= 0.0175) **or** 7.20 ÷ 360 (= 0.02) **or** finds 200g in Zurich, 7.2 ÷ 360 × 200 (= 4.0) **or** finds 360g in London, 3.5 ÷ 200 × 360 (= 6.30) **or** finds grams per unit cost, 200 ÷ 3.50 (= 57.1..) **or** 360 ÷ 7.20 (= 50**)**	Accept figures rounded or truncated to 2sf throughout
		P1	for a complete process to find comparable figures in the same currency, eg comparing 200g in £ or francs 3.5 × 1.25 (= 4.375) **and** 7.2 ÷ 360 × 200 (= 4.0) **or** "4.0" ÷ 1.25 (= 3.20) **OR** comparing 360g in £ or francs "6.30" × 1.25 (= 7.875) **or** 3.5 ÷ 200 × 360 (= 6.30) **and** 7.20 ÷ 1.25 (= 5.76) **OR** comparing 1g in £ or francs "0.0175" × 1.25 (= 0.0218…) **and** 7.20 ÷ 360 (= 0.02) **or** £3.50 ÷ 200 (= 0.0175) **and** "0.02" ÷ 1.25 (= 0.016) **OR** comparing quantity per unit cost in £ or francs 200 ÷ 3.50 (= 57.1…) **and** 360 ÷ "5.76" (= 62.5) **or** 200 ÷ "4.375" (= 45.7…) **and** 360 ÷ 7.20 (= 50**)**	Accept working in pence Ignore incorrect units for P marks Award of this mark implies the previous mark
		C1	for Zurich supported by correct comparable values, eg 4.3(75 F) **and** 4(.0 F) **or** (£)3.2(0) **or** 7.8(75 F) **or** (£)6.3(0) **and** (£)5.76 **or** 0.021(8… F) **and** 0.02 (F) **or** (£)0.017(5) **and** (£)0.016 **or** 57(.1… g/£) **and** 62(.5 g/£) **or** 45(.7… g/F) **and** 50 (g/F)	Clear indication that bar is better value for money in Zurich supported by correct values for comparison Units not needed but if stated must be correct. Table with examples at end of mark scheme

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
23	statements	C1	for identifying that the number 17 should only be in the intersection **Acceptable examples** 17 should only be in the middle Take 17 out of (set) A only appropriate 17 crossed out on the Venn diagram **Not acceptable examples** Tom should put 17 in B Should have two 17's in the middle Take 17 out of (set) A Needs to remove a 17 17 is on twice	Accept correct descriptions using correct set notation for both marks Diagram may be used to support statements
		C1	for identifying that the number 1 is missing from the diagram **Acceptable examples** 1 should be in the outside region He should put 1 outside the circles Tom needs to put the number 1 on the diagram include 1 (outside $A \cup B$) 1 added to the diagram in the correct region **Not acceptable examples** Add the remaining numbers There are missing odd numbers between 0 and 20 put all the odd numbers outside the circles add the odd numbers in the $\mathscr{E}$ box include the even numbers 1 should be outside the Venn diagram	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
24 (a)	5, (0), –3, –4, (–3), 0, 5	B2 (B1	for all 5 correct values for at least 2 correct values)	
(b)	Graph drawn	B2 (B1	for a fully correct graph ft (dep on B1 in (a)) for plotting at least 5 of the points from their table correctly)	Accept freehand curves drawn that are not line segments Ignore anything drawn outside the required range
25	Yes (supported)	P1	for start to a process to find a percentage increase, eg $85-76\,(=9)$ or $66-65\,(=1)$ **or** $\frac{85}{76}\,(=1.118...)$ or $\frac{66}{65}\,(=1.015...)$	Accept use of rounded and truncated figures for all marks.
		P1	for process to find a % increase, eg $\frac{"9"}{76}\times 100\,(=11.84...)$ or $\frac{"1"}{65}\times 100\,(=1.53...)$ **or** $\frac{85}{76}\times 100-100\,(=11.84...)$ oe or $\frac{66}{65}\times 100-100\;\;(=1.53...)$ oe	May work in decimals or equivalent proportions throughout
		P1	for processes to find both % increases, eg $\frac{"9"}{76}\times 100\,(=11.84...)$ **and** $\frac{"1"}{65}\times 100\,(=1.53...)$ **or** $\frac{85}{76}\times 100-100\,(=11.84...)$ oe **and** $\frac{66}{65}\times 100-100\;\;(=1.53...)$ oe	
]		C1	for Yes supported by correct figures, eg 11(.842…) ÷ 1.5(38…) = 7.3 to 8 **or** 11(.842...) **and** 1.5(38…) × 7 = 10(.766…) **or** 11(.842…) ÷ 7 = 1.57 to 1.7 **and** 1.5(3…) **or** 0.11(842…) **and** 0.10(766…)	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
26	240	P1	for forming an appropriate equation, eg $2x + 11 = 4x - 4$ **or** $2x + 11 + 4x - 4 + 2x + 5 = 72$ **or** $8x + 12 = 72$	
		P1	(dep P1) for process to correctly isolate terms in x, eg $4x - 2x = 11 + 4$ **or** $2x + 4x + 2x = 72 - 11 + 4 - 5$ **or** $x = 7.5$ oe	$8x = 60$ **or** $2x = 15$ implies P2 A correct length stated or shown on diagram implies P2, eg $AB = 20$, $AC = 26$, $CB = 26$
		P1	for correct application of Pythagoras, eg $("26")^2 - \left(\frac{"20"}{2}\right)^2$ **or** $[AC]^2 - \left(\frac{[AB]}{2}\right)^2$ **or** height = 24 **or** a complete method to find the height for a correct trig statement to find CAB or CBA or ACB, eg $\cos CAB = \cos CBA = \frac{"20" \div 2}{"26"}$ **or** $\cos CAB = \cos CBA = \frac{20^2 + 26^2 - 26^2}{2 \times 20 \times 26}$ **or** $\cos ACB = \frac{26^2 + 26^2 - 20^2}{2 \times 26 \times 26}$ **or** $CAB = 67.3\ldots$ **or** $CBA = 67.3\ldots$ **or** $ACB = 45.2\ldots$	[AC] [BC] [AB] [ACB] [CAB] and [BAC] must be clearly identified if incorrect. May be on diagram. $AB = 2 \times "7.5" + 5\ (= 20)$ $AC = 2 \times "7.5" + 11\ (= 26)$ $CB = 4 \times "7.5" - 4\ (= 26)$ Alternative scheme not expected on Foundation tier but may be seen.
		P1	for process to find area of triangle, eg "20" × "24" ÷ 2 **or** $[AB] \times [\text{height}] \div 2$ for process to find area of triangle, eg $\frac{1}{2} \times "26" \times "20" \times \sin"67.3..."$ **or** $\frac{1}{2} \times "26" \times "26" \times \sin"45.2..."$ **or** $\frac{1}{2} \times [AB] \times [AC] \times \sin[BAC]$ **or** $\frac{1}{2} \times [BC] \times [AC] \times \sin[ACB]$	ft incorrect figures providing at least one previous P1 awarded. [height] is what they clearly think is the height of the triangle but not 26 or 20 or 10
		A1	cao	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
27	3.125×10^7	M1 A1	for $(k =)\ (1.25\times10^{-12})\div(4\times10^{-20})$ **or** for the digits 3125 cao	Condone missing brackets on division 3.1×10^7 or 3.12×10^7 or 3.13×10^7 will score M1A0
28	7.96	M1 M1 A1	for method to find volume of cylinder, eg $\pi \times 3^2 \times 10$ (= 90π or 282.74…) for method to find density, eg 2250 ÷ "282.74…" **or** 2250 ÷ [volume] for answer in the range 7.95 to 7.96	 [volume] is any value they clearly think is the volume of the cylinder but must come from a calculation and must not be 3 or 10

Question 22 additional guidance

	London	Zurich
100g	3.5 ÷ 2 = **£1.75** 1.75 × 1.25 = **2.1875 F**	7.2 ÷ 360 = **2.00 F** 2.00 ÷ 1.25 = **£1.60**
200g	**£3.50** 3.5 × 1.25 = **4.375 F**	7.2 ÷ 360 × 200 = **4.0 F** 4.0 ÷ 1.25 = **£3.20**
360g	3.5 ÷ 200 × 360 = **£6.30** 6.30 × 1.25 = **7.875 F**	**7.20 F** 7.20 ÷ 1.25 = **£5.76**
1g	£3.50 ÷ 200 = **£0.0175** × 1.25 = **0.021875 F**	7.20 ÷ 360 = **0.02 F** ÷ 1.25 = **£0.016**
40g	£3.50 ÷ 5 = **£0.70** 0.7 × 1.25 = 0**.875 F**	7.20 ÷ 9 = **0.8 F** 0.8 ÷ 1.25 = **£0.64**
By weight	350 ÷ 200 = **1.75 p/g** 350 × 1.25 = 4.375 4.375 ÷ 200 = **0.021875 F/g**	720 ÷ 360 = **0.02 F/g** 720 ÷ 1.25 = 576 576 ÷ 360 = **1.6 p/g**
By cost	200 ÷ 350 = **0.571 g/p** 350 × 1.25 = 437.5 200 ÷ 437.5 = **45.7 g/F**	360 ÷ 720 = **50 g/F** 720 ÷ 1.25 = 576 360 ÷ 576 = **0.625 g/P**

Modifications to the mark scheme for Modified Large Print (MLP) papers: 1MA1 2F

Only mark scheme amendments are shown where the enlargement or modification of the paper requires a change in the mark scheme. Notes apply to both MLP papers and Braille papers unless otherwise stated.

The following tolerances should be accepted on marking MLP papers, unless otherwise stated below:
Angles: ±5º
Measurements of length: ±5 mm

PAPER: 1MA1_2F			
Question		**Modification**	**Mark scheme notes**
3		Wording added: ‘four’	Standard mark scheme
4		Wording ‘this polygon’ removed and replaced with ‘the polygon below’. Diagram enlarged and left aligned.	Standard mark scheme
7	(c)	Wording added: ‘Look at the diagram for Question 7(c) in the Diagram Booklet. It shows a probability scale.’ Word ‘below’ removed and replaced with ‘in the Diagram Booklet’. Wording removed: ‘with a cross (x)’. Diagram enlarged. For Braille: sentence added ‘Bumpons are provided if you wish to use them.’	Standard mark scheme
10		Wording changed: ‘Look at the diagram for Question 10 in the Diagram Booklet. It shows a square and shape A.’ Wording ‘the shape below’ removed and replaced with ‘shape A as shown in the Diagram Booklet.’ Wording ‘this shape’ removed and replaced with ‘shape A’. Diagrams enlarged. Wording added to the diagrams ‘Diagrams NOT accurately drawn’ Shapes labelled ‘square’ and ‘shape A’.	Standard mark scheme
11	(a) (b)	Letter changed: ‘x’ to ‘w’. Letters changed: ‘d’ to ‘p’ and ‘e’ to ‘q’.	B1 for $6wy$ M1 for $5p$ **or** $-3q$ A1 for $5p - 3q$

PAPER: 1MA1_2F			
Question		**Modification**	**Mark scheme notes**
13		Wording changed: 'Look at the diagram for Question 13 in the Diagram Booklet. It shows triangle ABC' Wording added: 'The reflex angle BAC = 310° Angle ACD = 115°' Diagram enlarged. Angles moved outside of angle arcs and angle arcs made smaller.	Standard mark scheme
14		Wording added: 'Look at the diagram for Question 14 in the Diagram Booklet. It shows an incomplete travel graph.' Wording 'below' removed and replaced with 'in the Diagram Booklet'. Diagram enlarged. Graph cropped at 7pm on the horizontal axis. Open headed arrows.	
	(b)	Wording added: 'in the Diagram Booklet.' For Braille: sentence added 'Bumpons and drawing film are provided if you wish to use them.'	Standard mark scheme
18		Wording added: 'Look at the diagram for Question 18 in the Diagram Booklet. It shows triangle A and triangle B on a grid.' Diagram enlarged. Open headed arrows. Shading changed. Shapes labelled 'triangle A' and 'triangle B'	Standard mark scheme
19	(b)	Wording added: Look at the diagram for Question 19(b) in the Diagram Booklet. It shows a number line. Wording 'below' removed and replaced with 'in the Diagram Booklet'. Diagram enlarged. Open headed arrow. For Braille: sentence added 'Bumpons and drawing film are provided if you wish to use them.'	Standard mark scheme

PAPER: 1MA1_2F			
Question		**Modification**	**Mark scheme notes**
21		Wording changed: 'Look at the diagram for Question 21 in the Diagram Booklet. It is a scatter graph showing information about some ships.' Diagram enlarged. Crosses changed to dots. Vertical axis cropped so it starts at 15. Open headed arrows. m changed to metres.	
	(b)	Wording added: 'in the Diagram Booklet' For Braille: sentence added 'Drawing film is provided if you wish to use it.'	Standard mark scheme
	(c)	Value '194' changed to '190'.	Standard mark scheme
22		Information in boxes removed. g changed to gram.	Standard mark scheme
23		Wording added: 'Look at the diagram for Question 23 in the Diagram Booklet. It shows a Venn diagram.' Wording 'Here is his answer.' removed and replaced with 'His answer is shown in the Diagram Booklet.' Diagram enlarged. Numbers arranged in two rows.	Standard mark scheme
24	(a)	Word added 'below'. Wording added 'There are five spaces to fill.' Table enlarged, turned vertically and left aligned. For Braille: missing values labelled (i), (ii), (iii), (iv) and (v)	Standard mark scheme
	(b)	Wording added: 'Look at the diagram for Question 24(b) in the Diagram Booklet. It shows a grid.' Diagram enlarged. Open headed arrows. Vertical axis cropped at -5. For Braille: sentence added 'Bumpons and drawing film are provided if you wish to use them.'	Standard mark scheme

PAPER: 1MA1_2F			
Question		**Modification**	**Mark scheme notes**
25		p changed to pence.	Standard mark scheme
26		Wording changed: 'Look at the diagram for Question 26 in the Diagram Booklet. It…' Wording added: 'AC = 2x + 11 AB = 2x + 5 BC = 4x – 4' Diagram enlarged. Lines on the sides made longer.	Standard mark scheme
28		Wording added: 'Look at Diagram 1, Diagram 2 and Diagram 3 for Question 28 in the Diagram Booklet. You may be provided with a model. They are NOT accurate. Diagram 1 and the model show a solid cylinder with base radius 3 cm and height 10 cm. Diagram 2 shows the base of the cylinder. Diagram 3 shows the side of the cylinder.' g changed to grams. Model provided. Diagram enlarged. 2 additional 2D diagrams added. Open headed arrows.	

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