Pearson Edexcel

Mark Scheme (Results)

Summer 2022

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 (eg 3.5 – 4.2) then this is inclusive of the end points (eg 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 eg 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 eg "12" $\times$ 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 eg [area] $\times$ 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 awarded for a fully correct statement(s) with no contradiction or ambiguity

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		1480	B1	cao	
2		$\frac{7}{10}$	B1	oe fraction	
3		3	B1	cao	
4		Suitable number eg 725	B1	for a suitable 3 digit number ending in 0 or 5	
5		40	B1	cao	
6		−11, −7, −2, 3, 8, 10	B1	for −11, −7, −2, 3, 8, 10	Accept reverse order
7	(a)	Hexagon	B1	accept irregular hexagon	Accept unambiguous misspellings
	(b)	*AF*	B1	cao Accept *FA*	
	(c)	*AB* or *EF*	B1	*AB* or *EF*. Accept *BA* or *FE* or both	
8	(a)	3, 2	B1	cao	
	(b)	Point at (−4, 3)	B1	cao	
	(c)	Circle drawn, centre (1, −1)	B2	fully correct diagram	Allow reasonable hand-drawn attempts
			(B1	circle drawn with radius 4 cm (any centre) **or** circle drawn using centre (1, −1) $r \neq 4$ cm)	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
9 (a)	23	B1	cao	
(b)	10 : 56	M1	for 10 or 56 identified	56 : 10 implies this mark only
		A1	for 10 : 56 or any other equivalent ratio	Accept 1 : 5.6
10	213	P1	for beginning to work with costs eg 1428 – 150 (= 1278) **or** 1428 ÷ 6 (= 238) **and** 150 ÷ 6 (= 25)	
		P1	for complete process to find monthly payment eg "1278" ÷ 6 or "238" – "25"	
		A1	cao	
11	39 with reasoning	M1	for a method to find angle *ACB* eg 180 – 116 − 25	
		A1	for 39	*ACB* = 39 or *x* = 39 or *C* = 39 or just 39 is acceptable for this accuracy mark
		C1	for *x* = 39 with reasoning eg Angles in a <u>triangle</u> add up to 180 **and** Vertically <u>opposite angles</u> are equal **or** Vertically <u>opposite</u> angles are equal **or** Angles on a straight <u>line</u> add up to 180 **OR** The <u>exterior angle</u> of a triangle is <u>equal</u> to the sum of <u>the interior opposite angles</u> **and** Angles on a straight <u>line</u> add up to 180	Angle may be shown on diagram if no ambiguity or contradiction The key words underlined must be present. There should be no incorrect reasons given. All reasons given should be used, not just a list of angle facts.

Paper: 1MA1/2F					
Question		**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
12	(a)	9	B1	cao	
	(b)	6	M1	starts to find input using inverse operations eg 154 ÷ 11 (= 14) **or** indicates ÷ 11 **and** − 8 **or** derivation of equation eg (8+ n) × 11 = 154 **or** starting to solve for unknown eg 154 − 8 × 11 (= 66)	÷11 and −8 could be seen in a flow diagram Evidence could be provided by algebraic statement, numerical statements or by diagram
			A1	cao	
13		53 19 **67** 139 **17** 26 16 **59** 70 **45** **83** **198**	B3 (B2 (B1	for a fully correct table for at least 7 figures correctly placed) for the 4, 5 or 6 values correctly placed)	
14	(i)	>	B1	cao	
	(ii)	=	B1	cao	
15	(a)	774	M1	for at least three of 0 × 3 (= 0) or 1 × 57 (= 57) or 2 × 84 (= 168) or 3 × 75 (= 225) or 4 × 81 (= 324) **or** for 0 × 3 + 1 × 57 + 2 × 84 + 3 × 75 + 4 × 81	Note if 2 non zero products are seen award M1 Use of the figure 777 is enough for M1
			A1	cao	
	(b)	3	M1	for method to begin to work with the median, eg 300 ÷ 2 (= 150)	Accept 301 in place of 300
			A1	cao	NB mean = 2.58

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
16	47	P1	for process to find scale factor eg 62 ÷ 12.4 (= 5) **or** 12.4 ÷ 62 (= 0.2) **or** 9.4 ÷ 12.4 (= 0.758...) **or** 12.4 ÷ 9.4 (= 1.31..)	Note 1:500 is an acceptable scale factor Accept working in mixed units or with inconsistent units eg 620 ÷ 12.4 (= 50) for process marks only
		P1	for process to use the scale factor eg "5" × 9.4 **or** 9.4 ÷ "0.2" **or** 62 × "0.758.." **or** 62 ÷ "1.31.."	
		A1	Accept answers in the range 46.5 to 47.7	
17	Line Drawn	B3	for a correct line between $x = -2$ and $x = 4$	Accept freehand line drawn
		(B2	for a correct straight-line segment through at least 3 of (−2, 6), (−1, 5), (0, 4), (1, 3), (2, 2), (3, 1), (4, 0) **or** for all of these points plotted but not joined **or** for a line drawn with a negative gradient through (0, 4) **and** clear intention to use a gradient of −1, eg a line through (0, 4) going across 1 square and down 1 square)	Ignore any incorrect points Table of values | x	−2	−1	0	1	2	3	4
---	---	---	---	---	---	---	---
y	6	5	4	3	2	1	0	
		(B1	for at least 2 correct points stated or plotted **or** a line drawn with negative gradient through (0, 4) **or** a line with gradient −1)	Ignore any incorrect points Coordinates may be in a table or working Do not accept $y = 4$ drawn

Paper: 1MA1/2F					
Question	**Answer**	**Mark**	**Mark scheme**		**Additional guidance**
18	13.2	P1	process to convert decimal time, eg 25.3×60 (= 1518) or 0.3×60 (= 18) **OR** process to work with mean, eg [time] ÷ 115 (= 0.22) or 1÷ (115 ÷ [time]) (= 0.22)		[time] could be 25.3 or any other time that has been incorrectly changed from 25.3 hours
		P1	full process to work out mean time allocated for appointment, eg "1518" ÷ 115 or "0.22" × 60		
		A1	cao		
19	1.19	P1	process to find number of small bags that can be filled, eg [3kg] ÷ 150 (= 20) oe		[3kg] must be 3 and zeros only eg 300 Build up methods are allowed to imply process
		P1	for starting a process to work with percentage for cost of box, eg $17.60 \times \frac{35}{100}$ (= 6.16) **or** 100 + 35 (= 135)	works with starting cost per small bag, 17.60 ÷ "20"	Cost per small bag given as £0.88 will imply P1P1
		P1	for full process to work with percentage increase, eg $17.60 \times \frac{"135"}{100}$ (= 23.76)	begins process to work with percentage for a small bag, eg "0.88" $\times \frac{35}{100}$ (= 0.308)	
		P1	full process to find selling price for small bag, eg "23.76" ÷ "20" (= 1.188)	full process to find selling price for small bag, "0.88" $\times \frac{135}{100}$ (= 1.188) oe	
		A1	cao		

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
20 (a)	0.87, 0.94, 0.94	B2	for all probabilities correct	Accept any equivalent fraction, eg $\frac{87}{100}, \frac{47}{50}$
		(B1	for 0.87 or 0.94 correctly placed)	or equivalent percentage form 87%, 94%
(b)	0.0078	M1	for 0.13×0.06 oe	
		A1	0.0078 oe	Accept any equivalent fraction, eg $\frac{39}{5000}$
				or equivalent percentage form 0.78% or 7.8×10^{-3}
21 (a)	x^{15}	B1	cao	
(b)	$40 - 10x$	M1	for method to expand one bracket or collect like terms, eg $4 \times x + 4 \times 3 (= 4x + 12)$ **or** $7 \times 4 - 7 \times 2x (= 28 - 14x)$ **or** $4 \times x - 7 \times 2x (= 4x - 14x)$ **and** $4 \times 3 + 7 \times 4 (= 12 + 28)$	
		A1	oe	
(c)	$3x^2(5x + y)$	M1	for $3(5x^3 + x^2y)$ **or** $x(15x^2 + 3xy)$ **or** $3x(5x^2 + xy)$ **or** $x^2(15x + 3y)$ **or** $3x^2(ax + by)$	Where $a \geq 1$ and $b \geq 1$
		A1	cao	
22	translation $\begin{pmatrix} -5 \\ 6 \end{pmatrix}$	B1	for translation	Award no marks if more than one transformation is given
		B1	for vector $\begin{pmatrix} -5 \\ 6 \end{pmatrix}$	Do not accept as a coordinate $(-5, 6)$

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
23	89.5 and 90.5	B1	for 89.5 in the correct position	
		B1	for 90.5 in the correct position	Accept $90.4\dot{9}$ or 90.499(…)
24 (a)	19	P1	for process to find area available at festival B, eg 700×2000 (=1 400 000)	
		P1	for finding the area available per person at one festival, eg $80\,000 \div 425$ (= 188.23..) **or** [area] ÷ 6750 (= 207.40..)	Accept either number rounded eg 207 or 188
		P1	for finding the area available per person at both festivals, eg $80\,000 \div 425$ (= 188.23..) **and** [area] ÷ 6750 (= 207.40..)	Accept both numbers rounded eg 207 and 188
		A1	answer in the range 18.7 to 19.5	
(b)	explanation	C1	for a valid statement relating to scale factor for area, **Acceptable examples** there are 10000 (cm^2) in 1 (m^2) because 1 m^2 is the same as $100 \times 100 = 10000\ cm^2$ there are 2 side lengths that change from 1 m to 100 cm $300 \div 3$ is 100 should use 100^2 $300 \div 100 \div 100 = 0.03$ $3 \times 100 \times 100 = 30000$ Because it's area not length. Because it's in m^2 not just metres He hasn't taken the squared sign into account **Not acceptable examples** there are 1000 cm in 1 m Callum is correct because ……. $300 \div 3$ is 100 $3^2 = 9$ $300 \times 300 = 90000$ You have to square the number	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
25	14.5, 21	P1	for process to work with coordinates, eg $4 - (-3) (= 7)$ **or** $9 - 1 (= 8)$	Accept in reverse order eg $-3 - 4 (= -7)$ and negative distances throughout
		P1	for process to use ratio, eg "7" ÷ 2 (= 3.5) **or** "8" ÷ 2 (= 4) **or** "7" × 3(= 21) **or** "8" × 3 (= 24)	This mark is implied by 10.5 or 12 or 17.5 or 20
		P1	for complete process to find either the *x* or the *y* coordinate of *N*, eg "3.5" × 3 + 4 or "4" × 3 + 9 or "3.5" × 5 –3 or "4" × 5 + 1 **OR** to find both the required distances eg "3.5" × 3 (= 10.5) **and** "4" ×3 (= 12) or "21" ÷ 2 (= 10.5) **and** "24" ÷ 2 (= 12) or "3.5" × 5 (= 17.5) **and** "4" × 5 (= 20)	
		A1	oe	
26	600.74	M1	works out decrease for one year, eg 679 × 4 ÷ 100 (=27.16) oe **or** 679 × (100 – 4) ÷ 100 (= 651.84) oe	Implied by 679× 0.12 (=81.48) or 679 × 0.88 (=597.52)
		M1	for compound method, eg 679 × "0.96"^{t}, $t \geq 2$ **or** "651.84" × "0.96" (= 625.76..) or "651.84" × "0.04" (=26.07) **or** for answers in the range 600.71 to 600.74 exclusive	Values may be rounded or truncated
		A1	accept 600.71 **or** 600.72 **or** 600.73 **or** 600.74	If the correct answer is seen and the difference found award M1M1A0

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
27	No (supported)	P1	for a conversion with litres and gallons, eg 18 ÷ 4.5 (= 4) or 8 × 4.5 (= 36)	See page at end of mark scheme
		P1	for a conversion with £ and euros, eg 27 × 0.85 (= 22.95) or 40.8 ÷ 0.85 (= 48)	
		P1	for finding the unit price, eg 27 ÷ 18 (= 1.5) **OR** finding proportionality for fuel eg ("36" ÷ 18) (= 2)	May compare cost per gallon or cost in euros May be seen in a calculation or given in a description
		C1	for No with comparative figures, eg No with 20.4 **and** 22.95 **or** No with 1.275 **and** 1.133..	Accept comparative figures rounded or truncated No is implied by eg Wales is cheaper
28	$x = 6.5$, $y = -2.75$	M1	for a correct method to eliminate either x or y or method leading to substitution	(condone one arithmetic error)
		M1	(dep) for substituting found value in one of the equations **OR** correct method after starting again	(condone one arithmetic error)
		A1	for $x = 6.5$, $y = -2.75$ oe	

QUESTION 27 – Additional information NOT Exhaustive

Cost per litre in £: 27 × 0.85 (=22.95) "22.95" ÷ 18 (=1.275) 8 × 4.5 (=36) No **and** 40.8 ÷ "36" = 1.133.. (cost per litre in £ in Wales) compared to 1.275 (cost per litre in £ in Spain).	**Cost per litre in euros:** 27 ÷ 18 (=1.5) 8 × 4.5 (=36) 40.8 ÷ 0.85 (= 48) No **and** "48" ÷ "36" = 1.333.. (cost per litre in euros in Wales) compared to 1.5 (cost per litre in euros in Spain).
Cost per gallon in £: 40.8 ÷ 8 (=5.1) 27 × 0.85 (=22.95) 18 ÷ 4.5 (= 4) No **and** "22.95" ÷ "4" = 5.7375 (cost per gallon in £ in Spain) compared to 5.1(0) (cost per gallon in £ in Wales).	**Cost per gallon in euros:** 40.8 ÷ 0.85 (=48) "48" ÷ 8 (= 6) 18 ÷ 4.5 (=4) No **and** 27 ÷ "4" = 6.75 (cost per gallon in euros in Spain) compared to 6 (cost per gallon in euros in Wales). **Note:** "2" comes from 8 ÷ "4" or "36" ÷ 18
Cost of 8 gallons in £: 18 ÷ 4.5 (= 4) 27 × 0.85 (=22.95) "22.95" × "2" (=45.90) No **and** 45.90 (total cost in £ in Spain) compared to 40.80 (total cost in £ in Wales given).	**Cost of 8 gallons in euros:** 18 ÷ 4.5 (=4) 40.8 ÷ 0.85 (=48) 27 × "2" (= 54) No **and** 54 (cost for 8 gallons in euros in Spain) compared to 48 (cost of 8 gallons in euros in Wales).
Cost of 18 litres in £: 8 × 4.5 (= 36) 40.8 ÷ "2" (= 20.4) 27 × 0.85 (= 22.95) No **and** 22.95 (cost for 18 litres in £ in Spain) compared to 20.40 (cost of 18 litres in £ in Wales). **OR** 18 ÷ 4.5 (= 4) 27 × 0.85 (= 22.95) 40.8 ÷ "2" (= 20.4) No **and** 22.95 (cost for 18 litres in £ in Spain) compared to 20.40 (cost of 18 litres in £ in Wales).	**Cost of 18 litres in euros:** 18 ÷ 4.5 (=4) 40.8 ÷ 0.85 (=48) "48" ÷ "2" (= 24) No **and** 24 (cost for 18 litres in euros in Wales) compared to 27 (cost of 18 litres in euros in Spain given). **OR** 8 × 4.5 (= 36) 40.8 ÷ "2" (= 20.4) "20.4" ÷ 0.85 (= 24) No **and** 24 (cost for 18 litres in euros in Wales) compared to 27 (cost of 18 litres in euros in Spain given).

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**
2		Wording added '…to make the calculation below correct.' Braille: the text frame replaced with a blank space indicator. "Ans: __ " added.	Standard mark scheme
3		Wording added 'Below is a list of nine numbers.'	Standard mark scheme
6		Wording added 'Write the six numbers below in order of size.'	Standard mark scheme
7		Wording added 'Look at the diagram for Question 7 in the Diagram Booklet. It shows…' Diagram enlarged. Shading changed. Braille|: Sentence changed to "The diagram shows polygon ABCDEF on a square grid."	Standard mark scheme
8	(a)	Wording added 'Look at the diagram for Question 8 in the Diagram Booklet. It shows point A on a grid.' The wording 'Here is a centimetre grid' replaced by '1 square length on the grid represents 1 cm.' The axes labels moved to the top of the vertical axis and to the right of the horizontal axis. Open headed arrows. Diagram enlarged. Change the crosses to dots.	Standard mark scheme
8	(b)	Wording added 'On the grid in the Diagram Booklet, mark the point…'.	Standard mark scheme
8	(c)	Wording added 'On the grid in the Diagram Booklet,'	Standard mark scheme
9		Wording added 'Look at the diagram for Question 9 in the Diagram Booklet. It is a graph which shows…'. The small grid lines removed and intermediates added at intervals of 5. Some values changed so that they can be read on a grid line. Diagram enlarged. February changed to 25. June changed to 55. The axes labels moved to the top of the vertical axis and to the left of the horizontal axis. Open headed arrows. Right axis labelled. The crosses changed to dots.	(a) B1 for 25 cao (b) M1 for 10 or 55 identified A1 for 10 : 55 or any other equivalent ratio

PAPER: 1MA1_2F			
Question		**Modification**	**Mark scheme notes**
11		Wording added 'Look at the diagram for Question 11 in the Diagram Booklet. It shows…'. Diagram enlarged. The angles moved outside of the angle arcs and the angle arcs made smaller. Wording added: 'Angle *BAC* = 116° Angle *ABC* = 25° Angle *ECD* is marked *x*'. Braille: Extra information added: "In the diagram: ACD and BCE are straight lines"	Standard mark scheme
12	(a)	Wording added 'Look at the diagram for Question 12(a) in the Diagram Booklet. It shows a number machine.'; Diagram enlarged. Braille: frames removed.	Standard mark scheme.
12	(b)	Wording added 'Look at the diagram for Question 12(b) in the Diagram Booklet. It shows a different number machine.'; Diagram enlarged. Wording added 'Complete the number machine in the Diagram Booklet.' Braille: Boxes removed. In the blank space (i) added, and "Ans: (i) __"	Standard mark scheme

PAPER: 1MA1_2F		
Question	**Modification**	**Mark scheme notes**
13	Wording added 'Look at the incomplete two-way table for Question 13 in the Diagram Booklet.' Wording added '…to complete the two-way table in the Diagram Booklet. There are twelve spaces to fill.' Braille: |	With mattress	Without mattress	Total
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Single	(iv)	17	(iii)
Double	(viii)	(vii)	45
King size	67	(vi)	83
Total	(v)	(ii)	(i) | Add "Ans: (i) __ (ii) __ (iii) __ (iv) __ (v) __ (vi) __(vii) __ (viii) __"	Standard mark scheme but for Braille: B3 for a fully correct set of values (B2 for at least 4 values given) (B1 for (i) as 198 and (ii) as 59) Values: (i) 198 (ii) 59 (iii) 70 (iv) 53 (v) 139 (vi) 16 (vii) 26 (viii) 19
14	Wording added 'Below are three mathematical symbols.' The frame removed. Wording added 'Choose a symbol to make…'. Braille: "From the box, …" changed to "From the list, …"	Standard mark scheme
15	Wording added 'Look at the table for Question 15 in the Diagram Booklet. It shows…'.	Standard mark scheme

PAPER: 1MA1_2F			
Question		**Modification**	**Mark scheme notes**
17		Wording added 'Look at the diagram for Question 17 in the Diagram Booklet. It shows a grid.' Wording 'On the grid below' removed and replaced by 'On the grid in the Diagram Booklet'. Wording added 'Space for working.' The grid cut at $y = 7$ and $y = -2$. The intermediate lines removed at intervals of 0.5. Diagram enlarged. Open headed arrows. The axes labels moved to the top of the vertical axis and to the right of the horizontal axis. Braille: provided with a vertical table of values with the y values to be added with the words "You may use the table below to help you if you wish."	Standard mark scheme
18		Wording added 'Look at the information for Question 18 in the Diagram Booklet. It shows a sign that was in a doctor's waiting room'; Frame removed. Braille: Sentence changed to "The statement below was posted in a doctor's waiting room."	Standard mark scheme
20		Wording added 'Look at the diagram for Question 20 in the Diagram Booklet. It shows an incomplete probability tree diagram.'; Diagram enlarged. Wording added 'Complete the probability tree diagram in the Diagram Booklet. There are three spaces to fill.' Braille: (i), (ii) & (iii) in the blank spaces and "Ans: (i) __ (ii) __ (iii) __"	Standard mark scheme
21	(b)	The letter x changed to y.	Standard mark scheme but note change of letter.
22		Wording added 'Look at the diagram for Question 22 in the Diagram Booklet. It shows shape S and shape T on a grid. A cut out shape may be available if you wish to use it.' Cut out shape provided. Diagram enlarged. Shading changed. The axes labels moved to the top of the vertical axis and to the right of the horizontal axis. Open headed arrows. The shapes labelled as 'shape T' and 'shape S'.	Standard mark scheme