



Pearson

Mark Scheme (Results)

Summer 2024

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

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Summer 2024

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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. $2 \times 6 (=12)$ 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" $\times 50$; 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 E.g. [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

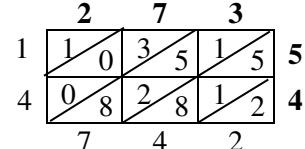
Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
1	18 000	B1	cao	
2	30	B1	cao	
3	reflex	B1	cao	
4	0.03, 0.1, 0.16, 0.2, 0.21	B1	for 0.03, 0.1, 0.16, 0.2, 0.21	accept 0.21, 0.2, 0.16, 0.1, 0.03
5	8	B1		Accept ± 8 or -8
6	1.5(0)	P1 P1 P1 A1	for $4 \times 1.30 (= 5.2(0))$ or $10 - 1.80 (= 8.2(0))$ for $10 - 1.80 - "5.20" (= 3)$ oe for " 3 " $\div 2$ cao SCB2 for answer (£)2.4(0)	Working could be in pence Condone answer £1.5(0)p

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
7	Bar chart			<p>Accept bar chart, vertical line graph, dual/multiple bar chart, composite bar chart, frequency polygon for all marks.</p> <p>Accept unambiguous abbreviations for labels eg L, P</p> <p>Allow linear scale not starting at 0 Scale must be marked on grid lines.</p> <p>Bars / lines / points must be unambiguously correct for their scale (scale must be present).</p> <p>Allow for correctly showing total hours worked for all four days on chart (13, 15, 13, 12)</p> <p>Horizontal axis does not need an overall 'day' label Condone frequency for number of hours. For C mark scale must start at 0 and be linear for the range of values plotted. Condone bars of unequal width Condone no gaps or inconsistent gaps</p>

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
8 (i)	50	M1 A1	<p>for $360 - 220 - 90$ oe</p> <p>cao</p>	
(ii)	Reason	C1	<p>for <u>angles</u> at a <u>point</u> add up to 360</p> <p>Acceptable examples</p> <ul style="list-style-type: none"> • A <u>full turn</u> adds up to 360 • <u>Full rotation</u> is 360 <p>Not acceptable examples</p> <ul style="list-style-type: none"> • Angles in a circle add to 360 • A whole circle adds up to 360 • It must add up to 360 degrees • $220 + 90 = 310, 360 - 310$ • Angles at a point add up to 180 • Angles on a straight line add to 180 	<p>Underlined words need to be shown</p> <p>Note: If line AO or OC or BO is extended and used to find x in (i) then allow C1 for <u>angles</u> on a straight <u>line</u> add to 180</p>

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
9 (a) (b) (c)	16	B1	cao	
	19	M1	starts method to find input using inverse operations eg $28 + 10 (=38)$ or sight of +10 and $\div 2$	+10 and $\div 2$ could be seen in a flow diagram Working may be next to number machine.
		A1	cao	
	Shown	M1	for carrying out at least one trial or for forming a suitable equation, eg $2x - 10 = x$ or for identifying 10	Trial can be for any value, must be correctly evaluated. Accept correct inverse function trial, correctly evaluated. If working seen on the number machine provided in the question allow for a trial other than input 13 or output 28.
		C1	for showing that an input of 10 gives an output of 10	Allow $10 \times 2 = 20 - 10 = 10$ for M1C1
10	2 : 3	M1	for $24 : 36$ oe or $3 : 2$ or $1.5 : 1$	
		A1	2 : 3 or 1 : 1.5	Do not ISW from 2:3
11 (a) (b) (c)	3	B1	cao	
	32	B1	cao	
	$30 \div (3 + 2) - 4$	B1	for brackets correctly placed	

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
12	6	P1 P1 P1 A1	for process to find perimeter of triangle eg $14 + 30 + 36 (= 80)$ for “80” $\div 4 (= 20)$ for a complete process eg $(“20” - 4 - 4) \div 2$ or “20” $\div 2 - 4$ cao	 36 $\div 4 + 14 \div 4 + 30 \div 4 (= 20)$ scores P1P1
13 (a) (b)	1 $\frac{2}{3}$	B1 P1 A1	Allow 100% for start of process to write down proportion of each coin, writes down a correct ratio, eg $1p : 2p = 2 : 1$ oe or a process to work out number of 1p coins and 2p coins, eg $40 \div 2 (= 20)$ and $(40 \div 2) \div 2 (= 10)$ or assigns numbers in correct proportion, eg 6 1p coins and 3 2p coins or finding the probability of a 2p coin $\left(= \frac{1}{3}\right)$ for $\frac{2}{3}$ oe	Allow $\frac{k}{k}$ Do not accept 100, do not accept certain. Accept any equivalent fraction, decimal form, 0.66(6...) or 0.67 or percentage form, 66(.6...)% or 67%

Paper: 1MA1/1F																																	
Question	Answer	Mark	Mark scheme	Additional guidance																													
14	14742	M1	for complete correct method with relative place value correct eg two lines of 1st method, internal numbers of grids, or complete structure shown of partitioning methods	<p>13650 $\frac{1092}{14742}$</p>  <table border="1"> <tr> <td></td><td>2</td><td>7</td><td>3</td><td></td></tr> <tr> <td>1</td><td>1</td><td>0</td><td>3</td><td>5</td><td>1</td><td>5</td><td>5</td></tr> <tr> <td>4</td><td>0</td><td>8</td><td>2</td><td>8</td><td>1</td><td>2</td><td>4</td></tr> <tr> <td></td><td>7</td><td>4</td><td>2</td><td></td><td></td><td></td><td></td></tr> </table> <p>10000 + 3500 + 150 + 800 + 280 + 12 = 14742</p>		2	7	3		1	1	0	3	5	1	5	5	4	0	8	2	8	1	2	4		7	4	2				
	2	7	3																														
1	1	0	3	5	1	5	5																										
4	0	8	2	8	1	2	4																										
	7	4	2																														
		M1	(dep on M1) for addition of all the appropriate elements of the calculation																														
		A1	cao																														

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
15 (a) (b) (c)	64 36 comparison	B1 M1 A1 C1	<p>cao</p> <p>for identifying 81 and 45 as the key numbers, eg $81 - 45$ or $45 - 81$ or 45 to 81</p> <p>cao</p> <p>for a correct comparison of medians that could ft their incorrect median in (a)</p> <p>Acceptable examples</p> <p>The adults were faster because they have the smaller median</p> <p>The adults were [11] minutes faster (on average)</p> <p>The adults were faster</p> <p>The adults took less time</p> <p>The children were slower</p> <p>The children took more time</p> <p>Children took [11] minutes more (on average)</p> <p>Children had a larger median than the adults.</p> <p>Not acceptable examples</p> <p>The children were faster</p> <p>The adults median was 64, the children's median was 75</p> <p>11 minutes difference</p> <p>The children had more time to run than the adults</p>	<p>It is insufficient to identify these on the diagram (eg as 1, 5)</p> <p>Answer of -36 gets M1A0</p> <p>Statement must be entirely true and not contradictory</p> <p>Figures not required in comparison, but if seen must be correct.</p> <p>Where [11] is the difference between 75 and their (a).</p> <p>If median in (a) is greater than 75 then converse statements would be correct ft.</p>

Paper: 1MA1/1F																																															
Question	Answer	Mark	Mark scheme	Additional guidance																																											
16	Pack of 8 (supported)	P1	<p>for a process (for at least 2 packs) of division of price by quantity eg at least 2 of $180 \div 4 (= 45)$ or $320 \div 8 (= 40)$ or $600 \div 12 (= 50)$</p> <p>OR any other process that could lead to a comparison of 2 packs eg $180 \times 2 (= 360)$ or $320 \div 8 (= 40)$ and “40” $\times 12 (= 480)$</p>	<p>Calculations could be in pounds or in pence</p> <table border="1"> <thead> <tr> <th></th> <th>4 pack</th> <th>8 pack</th> <th>12 pack</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.45</td> <td>0.40</td> <td>0.50</td> </tr> <tr> <td>2</td> <td>0.90</td> <td>0.80</td> <td>1.00</td> </tr> <tr> <td>4</td> <td>1.80</td> <td>1.60</td> <td>2.00</td> </tr> <tr> <td>8</td> <td>3.60</td> <td>3.20</td> <td>4.00</td> </tr> <tr> <td>12</td> <td>5.40</td> <td>4.80</td> <td>6.00</td> </tr> <tr> <td>16</td> <td>7.20</td> <td>6.40</td> <td>8.00</td> </tr> <tr> <td>24</td> <td>10.80</td> <td>9.60</td> <td>12.00</td> </tr> </tbody> </table> <p>Condone incorrect units.</p> <p>Pairwise comparison are possible, but check to see that this allows for a decision to be made. Check process.</p> <p>Assuming correct figures found:</p> <table border="1"> <thead> <tr> <th>Comparisons</th> <th>Conclusion possible</th> </tr> </thead> <tbody> <tr> <td>4 vs 8</td> <td>8 vs 12</td> <td>Yes</td> </tr> <tr> <td>4 vs 8</td> <td>4 vs 12</td> <td>Yes</td> </tr> <tr> <td>4 vs 12</td> <td>8 vs 12</td> <td>No</td> </tr> </tbody> </table> <p>Correct answer with no supportive working scores 0 marks.</p> <p>Do not allow A mark where inconsistent units would prevent comparison e.g. 0.40p and 45p</p>		4 pack	8 pack	12 pack	1	0.45	0.40	0.50	2	0.90	0.80	1.00	4	1.80	1.60	2.00	8	3.60	3.20	4.00	12	5.40	4.80	6.00	16	7.20	6.40	8.00	24	10.80	9.60	12.00	Comparisons	Conclusion possible	4 vs 8	8 vs 12	Yes	4 vs 8	4 vs 12	Yes	4 vs 12	8 vs 12	No
	4 pack	8 pack	12 pack																																												
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4 vs 8	4 vs 12	Yes																																													
4 vs 12	8 vs 12	No																																													
		A1	for ‘pack of 8’ and correct values that can be used to compare all 3 packs																																												

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
17	3.5	M1	<p>for correct expansion of brackets, ie $8x - 10$</p> <p>or dividing throughout by 2 as a first step to solve equation, eg $4x - 5 = 9$</p>	<p>For M marks step must be carried out not just intention shown.</p> <p>For example, if you see</p> $\begin{array}{rcl} 2(4x - 5) &=& 18 \\ \div 2 && \div 2 \end{array}$ <p>Award M1 for:</p> $4x - 5 = k \text{ with } k \neq 18, 36$ <p>ft their equation of the form $ax \pm b = c$</p> <p>For example, if you see</p> $\begin{array}{rcl} 8x - 10 &=& 18 \\ +10 && +10 \end{array}$ <p>Award M1 for:</p> $8x = k \text{ with } k \neq 8, 18$
		M1	for isolating terms in x , eg $8x = 18 + 10$ or $4x = 9 + 5$	
		A1	for 3.5 or $3\frac{1}{2}$ oe or $\frac{7}{2}$ oe	
18	1	B1	cao	
19	Translation $\begin{pmatrix} 5 \\ -4 \end{pmatrix}$	B1	for translation	
		B1	for $\begin{pmatrix} 5 \\ -4 \end{pmatrix}$	
			NB: award no marks if more than one transformation is given	<p>Do not accept 5 across, 4 down or 5 right, 4 down.</p> <p>Condone omission of brackets around vector. Do not accept vector given as coordinate.</p>
20	$4n - 3$	B2	for $4n - 3$ oe	Accept a different variable eg $4x - 3$
		(B1)	for $4n + k$ where $k \neq -3$ or is absent unambiguously shown)	Accept $u_n = 4n - 3$, $T = 4n - 3$ etc
				$n = 4n - 3$ or $4n^{\text{th}} - 3$ gets B1 only

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
21 (a)	$2\frac{2}{15}$	M1 A1	<p>for a method to subtract using a common denominator with at least one fraction correct (suitable common denominator for original fractions with at least one correct numerator)</p> <p>eg $\frac{57}{15} - \frac{25}{15}$ or (3) $\frac{12}{15} - (1)\frac{10}{15}$</p> <p>for $2\frac{2}{15}$ oe eg $\frac{32}{15}$</p>	<p>Use of decimals gets no credit unless it leads to a correct fraction</p> <p>ISW incorrect conversion from improper fraction to mixed number or incorrect simplification of improper fraction.</p>
(b)	Mistake identified	C1	<p>for explaining that Kevin did not convert to the correct mixed number</p> <p>Acceptable examples</p> <p>In his answer $\frac{9}{24}$ should have been $\frac{11}{24}$</p> <p>The 9 should be 11</p> <p>He has not got the numerator right in his final answer</p> <p>He simplified into the mixed number incorrectly</p> <p>He has not put the remainder as the numerator</p> <p>$1\frac{9}{24}$ would give you $\frac{33}{24}$ rather than $\frac{35}{24}$</p> <p>$\frac{35}{24} = 1\frac{11}{24}$</p> <p>Not acceptable examples</p> <p>He should have used a common denominator</p> <p>He has not simplified his answer</p> <p>He should have done keep, flip, change</p> <p>He converted the fraction wrongly</p> <p>The answer should be $1\frac{10}{24}$</p>	Figures may be seen in the question space.

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
22 (a)	Yes (supported)	P1 P1 P1 A1	<p>for a process to find the area of one shape, eg $10 \times 8 (= 80)$ or $10 \times 5 (= 50)$ or $8 \times 6 (= 48)$ or $(10 - 6) \times 5 (= 20)$ or $(10 - 6) \times (8 - 5) (= 12)$ or $6 \times (8 - 5) (= 18)$ or $5 \times 6 (= 30)$</p> <p>for a complete process to find the total area, eg “80” – “12” (= 68) or “50” + “18” (= 68) or “48” + “20” (= 68)</p> <p>for a complete process to find the area covered by 3 tins eg $3 \times 2.5 \times 10 (= 75)$ or for a complete process to find the number of litres needed eg “68” $\div 10 (= 6.8)$ or [area] $\div 10$ or for a complete process to find the number of tins needed eg “68” $\div 10 \div 2.5 (= 2.72)$ or [area] $\div 10 \div 2.5$</p> <p>for ‘Yes’ supported by correct figures eg $68 (\text{m}^2)$ and $75 (\text{m}^2)$ or $6.8 (\text{litres})$ and $7.5 (\text{litres})$ or $68 (\text{m}^2)$ and $2.72 (\text{tins needed})$</p>	<p>Do not award this mark if they go on to multiply by a third length</p> <p>[area] is what they believe to be the area</p> <p>Ignore incorrect amount of paint left over if correct figures seen.</p>
(b)	No effect (supported)	C1	<p>ft from (a) for “has no effect” with reason</p> <p>Acceptable examples No effect, she will need less paint It won’t change, she will still have enough No, she will have more paint left over No, as this will cover 82.5m^2</p> <p>Not acceptable examples Petra will need less paint She will have more paint left over She won’t have enough paint She will need more paint</p>	<p>Must have a decision in (a).</p> <p>Must include a decision eg yes / no / no effect.</p> <p>If figures included in the statement they must be correct for their [area] in (a).</p>

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
23 (a) (b)	10, 11, 13, 14, 16, 17 $\frac{5}{9}$	B1 M1 A1	cao for identification of 10, 12, 14, 15, 18 or for $\frac{a}{9}$ where $1 \leq a \leq 8$, a an integer, or $\frac{5}{b}$ where $b > 5$, b an integer or for incorrect form, eg 5 : 9 oe	Accept any equivalent fraction, decimal form, 0.55(5...) or 0.56 or percentage form, 55(.5...)% or 56%

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
24 (a)	Estimated value	P1	for using a value rounded to 1sf in a calculation eg $500 \div 10$ or 500×0.8 or 510×0.8 or 513×0.8 or 500×0.81	Their rounded value must be used in a calculation Rounding may occur after a correct process, eg $513 \div 10 = 51.3 \approx 50$ and 50×0.81 $513 \div 10 = 51.3 \approx 51$ and 51×0.8 scores P1P1 Accept 0.81 rounded to 0.80 for this mark Condone 0.81 rounded to 1 for this mark.
		P1	for a full process to find the total amount eg $500 \div 10 \times 0.8 (= 40)$ or $510 \div 10 \times 0.8 (= 40.8)$ or $500 \div 10 \times 0.81 (= 40.5)$ or [distance] $\div 10 \times$ [amount] oe	Where [distance] is their rounded 513 or 513 and [amount] is their rounded 0.81 or 0.81 Accept $513 \div 10 \times 0.81$ for this mark.
		A1	for a correct answer following through their correct rounded value(s)	Do not award this mark if 0.81 is rounded to 1
	(b) underestimate with reason	C1	ft from (a) eg underestimate as numbers rounded down	Must relate to estimation and not rounding of their final answer and they must have a final answer to part (a)

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
25 (a)	$y = \frac{3}{2}x + 3$	M1	<p>for a correct method to find the gradient of the line, eg $\frac{6-3}{2-0} (= \frac{3}{2})$</p> <p>or identifies 3 as the intercept in words or in a partial equation</p> <p>or for $y = [\frac{3}{2}]x + c$</p> <p>or for $y - b = [\frac{3}{2}](x - a)$ where (a, b) is a correct coordinate</p> <p>M1 for $y = \frac{3}{2}x (+ c)$ oe or for $y = “\frac{3}{2}”x + 3, m \neq 0$ or ($L =$) $\frac{3}{2}x + 3$ or $y - y_1 = \frac{3}{2}(x - x_1)$ or $y - b = “\frac{3}{2}”(x - a)$ where (a, b) is a correct coordinate</p>	<p>Just circling 3 is insufficient</p> <p>$[\frac{3}{2}]$ must be identifiable as their gradient c must be seen either as a letter or a number</p> <p>Award of this mark implies the first M1</p>
(b)	Equation	B1	for $y = 5x + c, c \neq 0$ oe	<p>Any correct equation gets 3 marks</p> <p>May be in any equivalent form</p>

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
26	7.5	P1 P1 P1 P1 A1	<p>for process to find the number of empty jars eg $3 \div 8 \times 400$ oe (= 150)</p> <p>for start of process to deal with ratios eg 3 : 4 and 4 : 8 or 3 : 4 : 8 oe</p> <p>for process to find the number of empty small jars eg $\frac{3}{3+4+8} \times "150"$ oe (= 30) or 30 : 40 : 80</p> <p>for process to find percentage, eg $\frac{"30"}{400} \times 100$ oe or $\frac{"7.5"}{100}$ for 7.5 or $7\frac{1}{2}$ oe</p> <p>OR</p> <p>for start of process to deal with ratios eg 3 : 4 and 4 : 8 or 3 : 4 : 8 oe</p> <p>for process to find the proportion of the empty jars that are small eg $\frac{3}{3+4+8} (= \frac{1}{5})$</p> <p>for process to find the proportion of Kasim's jars that are empty small jars eg $\frac{3}{8} \times \frac{1}{5} (= \frac{3}{40})$</p> <p>for process to find percentage, eg $\frac{3}{40} \times 100$ oe or $\frac{7.5}{100}$ for 7.5 or $7\frac{1}{2}$ oe</p>	

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
27	400	M1 A1	for $280 \div 0.7$ oe cao	
28	$x \leq -4$	M1 M1 A1	for a correct first step working with an equation or inequality eg $x + 11 - 11 \leq 5 - \frac{1}{2}x - 11$ or $x + 11 + \frac{1}{2}x \leq 5 - \frac{1}{2}x + \frac{1}{2}x$ or $2 \times x + 2 \times 11 \leq 2 \times 5 - 2 \times \frac{1}{2}x$	Can work with an equation or incorrect inequality symbol for both M marks Allow for subtracting 5 from both sides or subtracting x from both sides. For M marks step must be carried out not just intention shown. For example, if you see $\begin{array}{rcl} x + 11 & \leq & 5 - \frac{1}{2}x \\ -11 & & -11 \end{array}$ Award M1 for: $x \leq k - \frac{1}{2}x$ with $k \neq 5, k \neq 16$ or indicating $+\frac{1}{2}x$ reaching $kx + 11 \leq 5$ with $k \neq \frac{1}{2}, k \neq 1$ or indicating multiplying by 2 obtaining an equation or inequality with three of four terms correct and no term unchanged. Award 2 marks for answer of $x \leq -4$ where ? is an = or any incorrect inequality symbol, or for answer shown as just -4

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

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: $\pm 5^\circ$

Measurements of length: ± 5 mm

PAPER: 1MA1_1F		
Question	Modification	Mark scheme notes
3 (a)	Diagram enlarged. Wording added 'Look at the diagram for Question 3 in the separate Diagram Booklet. The diagram is NOT accurately drawn. The diagram shows an angle labelled y.'	Standard mark scheme
4	Word 'five' added 'Write these five numbers in order of size.'	Standard mark scheme
7	Word 'below' added 'The table below shows the number...' The table is turned vertically in the Question Paper. Wording added 'Look at the diagram for Question 7 in the separate Diagram Booklet. The diagram is a grid.' Sentence changed 'On the grid, create a suitable diagram or chart for this information.' For Braille: sentence added 'A spare tactile diagram, sticky labels and bumpons are provided for this question.'	Standard mark scheme
8	Diagram enlarged. Wording added 'Look at the diagram for Question 8 in the separate Diagram Booklet. The diagram is NOT accurately drawn.' The diagram shows three straight lines OA, OB and OC. $\text{Angle AOC} = 220^\circ$ $\text{Angle AOB} = x$ $\text{Angle BOC} = 90^\circ$	Standard mark scheme
9	Sentence changed 'Look at the number machine below.'	Standard mark scheme
12	Diagram enlarged. Letters added to corners of triangle (ABC) and rectangle (PQRS). Wording added 'Look at the diagram for Question 12 in the separate Diagram Booklet. The diagram is NOT accurately drawn.' The diagram shows a triangle labelled ABC and a rectangle labelled PQRS. In the triangle ABC: $\text{AB} = 36 \text{ cm}$ $\text{AC} = 30 \text{ cm}$ $\text{BC} = 14 \text{ cm}$ In the rectangle PQRS: PQ shows the length of the rectangle. $\text{PS} = 4 \text{ cm}$	Standard mark scheme

PAPER: 1MA1_1F								
Question	Modification	Mark scheme notes						
15	<p>Wording added ‘Look at the diagram for Question 15 in the separate Diagram Booklet. It shows a stem and leaf diagram.’</p> <p>Sentence changed: ‘She showed her results in the stem and leaf diagram.’</p>	Standard mark scheme						
16	<p>Diagram of batteries removed. Information put in boxes</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td>4 batteries</td> <td>8 batteries</td> <td>12 Batteries</td> </tr> <tr> <td>£1.80</td> <td>£3.20</td> <td>£6.00</td> </tr> </table>	4 batteries	8 batteries	12 Batteries	£1.80	£3.20	£6.00	Standard mark scheme
4 batteries	8 batteries	12 Batteries						
£1.80	£3.20	£6.00						
19	<p>Wording added: Look at the diagram for Question 19 in the separate Diagram Booklet.</p> <p>The diagram shows Triangle A and Triangle B on a coordinate grid.</p> <p>Describe fully the SINGLE transformation that maps Triangle A onto Triangle B.</p> <p>You may be given a cut out triangle for this question.</p> <p>Labels on triangles changed to ‘Triangle A’ and ‘Triangle B’</p>	Standard mark scheme						
22	<p>Diagram enlarged. Letters added to diagram (ABCDEF).</p> <p>Wording added: ‘Look at the diagram for Question 22 in the separate Diagram Booklet.</p> <p>The diagram is NOT accurately drawn.</p> <p>The diagram shows a plan of a floor labelled ABCDEF.</p> <p>In the diagram:</p> <p>$AB = 10 \text{ m}$ $BC = 5 \text{ m}$ $EF = 6 \text{ m}$ $FA = 8 \text{ m}$</p>	Standard mark scheme						
23	<p>Diagram enlarged. Labels changed to ‘Set P’ and ‘Set Q’.</p> <p>Wording added ‘Look at the diagram for Question 23 in the separate Diagram Booklet.</p> <p>The diagram shows a Venn diagram with Set P and Set Q.’</p>	Standard mark scheme						
25	<p>Diagram enlarged.</p> <p>Wording added ‘Look at the diagram for Question 25 in the separate Diagram Booklet.</p> <p>The diagram shows a straight line L drawn on a coordinate grid.’</p>	Standard mark scheme						

