

Mark Scheme (Results)

Summer 2025

Pearson Edexcel GCSE In Mathematics (1MA1) Higher (Calculator) Paper 2H

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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.

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.

**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.

# 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 М method mark awarded for a correct method or partial method Ρ process mark awarded for a correct process as part of a problem solving question 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) communication mark awarded for a fully correct statement(s) C with no contradiction or ambiguity unconditional accuracy mark (no method needed) В or equivalent oe correct answer only cao ft follow through (when appropriate as per mark scheme) special case SC dependent (on a previous mark) dep

indep independent

isw

awrt answer which rounds to

ignore subsequent working

Paper: 1MA1	Paper: 1MA1/2H						
Question	Answer	Mark	Mark scheme	Additional guidance			
1 (a)	2 × 5 <sup>3</sup>	M1	for a complete method to find prime factors; could be shown on a complete factor tree with no more than one arithmetic error or by division by prime factors with no more than one error or for 2, 5, 5, 5	Condone the inclusion of 1s for this mark			
		A1	accept $2 \times 5 \times 5 \times 5$				
(b)	150	M1	for at least 3 multiples of both 30 and 25 (can include 30 and 25)  or for the prime factors 2, 3, 5 and 5, 5 (could be shown in a factor tree with no more than 1 arithmetic error or Venn diagram or table)  or identifies the factors 5, 5 and 6 (may be seen in a grid)  or for a different common multiple, eg 300	30, 60, 90, 120, 150, 180, 210, 240 25, 50, 75, 100, 125, 150, 175 $30 = 2 \times 3 \times 5$ $25 = 5 \times 5$ Condone the inclusion of 1s for this mark			
		A1	150 or 2 × 3 × 5 × 5 oe				

Paper: 1MA1	/2H			
Question	Answer	Mark	Mark scheme	Additional guidance
2	1380 2070 3450	M1	for beginning to work with ratio, eg $6900 \div (2 + 3 + 5) (= 690)$ or $6900 \div 2 (= 3450)$ or $6900 \div 5 (= 1380)$ or one accurate value correctly assigned	Award M0 for a correct value assigned to an incorrect person
		M1	for full method to find the value for two people, eg two of: "690" × 2 (= 1380) or "690" × 3 (= 2070) or "690" × 5 (= 3450) or (6900 – "3450") ÷ 5 × 2 (= 1380) or (6900 – "3450") ÷ 5 × 3 (= 2070) or (6900 – "1380") ÷ 8 × 3 (= 2070) or (6900 – "1380") ÷ 8 × 5 (= 3450) or 6900 ÷ 2 (= 3450) and 6900 ÷ 5 (= 1380)	Award M0 for a correct value assigned to an incorrect person
		A1	for Sid (£) 1380	Correct values not assigned or assigned to an incorrect person, coming from an incorrect method, eg (Sid =) 6900 ÷ 2 =3450 and (Tam =) 6900 ÷ 3 =2300 and (Musa =) 6900 ÷ 5 =1380 will score no marks

Paper: 1MA1	Paper: 1MA1/2H						
Question	Answer	Mark	Mark scheme	Additional guidance			
3 (a)	6	P1	for a process to find a relevant area, eg $16 \times 14 \div 2$ (= 112) or $\pi \times \left(\frac{7}{2}\right)^2$ (= 38.4)	May be implied by $\frac{49}{4}\pi$			
		P1	for a process to find the shaded area, eg "112" – "38.4" (= 73.51)  or "8.96" – "3.07" (= 5.88)				
		P1	for a complete process to find the number of bags required for a full or partial area, eg "73.51" $\div$ 12.5 (= 5.88)  or "112" $\div$ 12.5 (= 8.96) or "38.4" $\div$ 12.5 (= 3.07)  or [area] $\div$ 12.5  or uses12.5 in a build up method to exceed [area], eg 12.5 $\times$ 6 (= 75) oe	[area] can be any area but cannot be a length.			
		A1	cao				
(b)	Statement	C1	for a valid statement relating to effect on number of bags needed, eg  Acceptable examples  Will need more bags It will increase  Will need an extra bag or will now need 7 bags He won't have enough There is no change (ft their [area] but must be supported by calculation)  Not acceptable examples  Will cover less area  Needs to change the number of bags needed There is no change (unsupported or incorrect ft their [area]) He may need more bags A calculation using 11 with no supporting statement				

4 Explanation C1 for valid explanation identifying mistake,  Acceptable examples It's on the wrong side of circle She shaded inside the circle (but should be outside) Shaded where P can't be She shaded/drew less than 2cm She shaded at most 2 cm P should be outside (or on) the circle P should be anywhere outside the 2cm radius She shaded around point C not (at least) 2cm from point C Nadia should have shaded away from the circle  Not acceptable examples Shading is wrong or she shaded it incorrectly Region is in the wrong place	_		Mark	Mark scheme	Additional guidance
She shaded all the points between C and where all the points P could be The question says at least 2cm and not only 2cm away She shaded in too close She shaded a circle not a square or should've drawn/shaded a square	Paper: 1MA1 Question 4	Answer	Mark C1	Acceptable examples It's on the wrong side of circle She shaded inside the circle (but should be outside) Shaded where P can't be She shaded/drew less than 2cm She shaded at most 2 cm P should be outside (or on) the circle P should be anywhere outside the 2cm radius She shaded around point C not (at least) 2cm from point C Nadia should have shaded away from the circle  Not acceptable examples Shading is wrong or she shaded it incorrectly Region is in the wrong place Doesn't fit inside the circle She shaded all the points between C and where all the points P could be The question says at least 2cm and not only 2cm away She shaded in too close	Additional guidance

Paper: 1MA1	/2H			
Question	Answer	Mark	Mark scheme	Additional guidance
5	10 000	M1	for recognising 8000 is $\frac{4}{5}$ eg 8000 ÷ 4 (= 2000) or $\frac{4}{5}$ = 8000 or 8000 = 80% or 8000 ÷ 80 (= 100) or $x \times 0.8$ = 8000	
		M1	for a complete method, eg "2000" × 5 or $8000 \times \frac{5}{4}$ or "100" × 100 or $\frac{8000}{0.8}$	
		A1	cao	

Paper: 1MA1	1/2H			
Question	Answer	Mark	Mark scheme	Additional guidance
6	370	P1	for finding the mean of list <b>A</b> , eg $(276 + 400 + 157 + 139) \div 4 (= 243)$ <b>OR</b> an expression for the mean of list <b>B</b> , eg $(530 + 500 + 270 + x + 440 + 320) \div 6 \left( = \frac{2060 + x}{6} \right) \text{ oe}$	
		P1	for beginning to work with ratio, eg "243" $\div$ 3 (= 81) or [A] $\div$ 3 or "243"×5 (=1215) or [A]×5 OR " $\left(\frac{2060+x}{6}\right)$ "×3 or [B]×3 or " $\left(\frac{2060+x}{6}\right)$ " $\div$ 5 or [B] $\div$ 5	<ul><li>[A] is what they believe to be the mean of A</li><li>[B] must be clearly their mean of B and be an expression including x</li></ul>
		P1	for completing the work with ratio, eg "81" × 5 (= 405) or [A] ÷ 3×5 or [B] × 3 ÷ 5 or " $\left(\frac{2060 + x}{6}\right)$ " × $\frac{3}{5}$ OR forms a suitable equation, eg "243"×5 = 3×" $\left(\frac{2060 + x}{6}\right)$ " or [A]×5 = 3×" $\left(\frac{2060 + x}{6}\right)$ "	
		P1	for working with mean of list <b>B</b> , eg "405" ×6 (= 2430) or $[A] \div 3 \times 5 \times 6$ OR for process to remove brackets and denominator, eg "243"×5×2="2060+x" or $[A] \times 5 \times 2 =$ "2060+x" or 2060+x="405"×6	
		A1	cao	

Paper: 1MA1	/2H			
Question	Answer	Mark	Mark scheme	Additional guidance
7	60.3	M1 A1	for a correct trig statement, eg tan $x = \frac{7}{4}$ $60.2 \text{ to } 60.42$	Other methods are possible but only award this mark at the point of an equation with <i>x</i> as the only unknown
8	25	P1	for working with density eg $8 \times 1500 \ (= 12000)$ or [density] $\times 1500$ for a conversion, eg "12 000" $\div$ 1000 (= 12) or $\frac{8}{1000} \ (= 0.008)$ or $300 \times 1000 \ (= 300000)$ or [mass] $\div$ 1000	P marks can be awarded in either order [density] is 8 × 10 <sup>n</sup> Condone 8×1500×300 for this mark only P marks can be awarded in either order [mass] must be what they believe to be mass following a calculation that uses 8 and 1500 but not 300
		A1	cao	
9	12, -3, 2	B2 (B1	all correct  for one or two correct)	$12-3x^2$ seen in working space gets B2 unless contradicted  May be seen in an expression of the correct form, eg $a + bx^n$

Paper: 1MA1	Paper: 1MA1/2H						
Question	Answer	Mark	Mark scheme	Additional guidance			
10	1.4	M1	for a correct first step eg $\frac{14-x}{3} \times 3 = 3x \times 3$ or $\frac{14}{3} - \frac{1}{3}x + \frac{1}{3}x = 3x + \frac{1}{3}x$ oe	For M mark, step must be carried out not just intention shown. For example if you see $\frac{14-x}{3} = 3x$			
		A1	oe, eg $\frac{14}{10}$	$\times 3$ $\times 3$ Only award M1 when you see $14-x=kx$ where $k > 3$			
11 (a)	0.2, 0.15,0.85,0.15	B2 (B1	all placed correctly for 2 or 3 placed correctly)				
(b)	0.29	M1	for one correct product, ft their tree diagram eg 0.8 × 0.85 (= 0.68) or 0.8 × "0.15" (= 0.12) or "0.2" × "0.85" (= 0.17) or "0.2" × "0.15" (= 0.03)	Working for part (b) may be seen in part (a) To apply ft values must be <1			
		M1	for a complete method, ft their tree diagram eg "0.2" × "0.85" + 0.8 × "0.15" or $1 - (0.8 \times 0.85 + "0.2" \times "0.15")$				
		A1	for 0.29 oe or ft their tree diagram	Cannot award A1ft if answer > 1			

Paper: 1MA1	Paper: 1MA1/2H						
Question	Answer	Mark	Mark scheme	Additional guidance			
12 (a)	Drawn	B3 (B2 (B1	for a fully correct box plot  for 3 or 4 correctly plotted values including box and whiskers/tails)  for 2 correctly plotted values including box or whiskers/tails or 5 correct values plotted or clearly identified and no box or whiskers/tails)	See diagram at end of scheme Min = 21 LQ = 31 Med = 35 UQ = 42 Max = 80			
(b)	16	B1	cao				
(c)	Explanation	C1	Acceptable examples Not true as the median could be the average of two ages No, the median is not always one of the numbers in the data Because there is an even amount of numbers, there must be 2 in the middle that have a mean of 35 She could be correct if the middle two numbers are both 35  Not acceptable examples Yes No more are between 31-35 than 35-42 No as there is an even number at least two must be 35 No the median is just the average We can't tell from the graph Because there is an even amount of numbers Not true as we do not know the exact ages of all data.	Figures need not be stated, but if they are, they must be correct			

Paper: 1MA1	/2H			
Question	Answer	Mark	Mark scheme	Additional guidance
13	Shown	M1	for a method to find the product of any two linear expressions (3 out of 4 terms correct or 4 terms ignoring signs) eg $2x^2 - 2x + 3x - 3 = 2x^2 + x - 3$ or $x^2 - x + 2x - 2 = x^2 + x - 2$ or $2x^2 + 4x + 3x + 6 = 2x^2 + 7x + 6$	Note that, for example, $2x^2 + x$ in the expansion of $(2x + 3)(x - 1)$ is regarded as 3 correct terms
		M1	(dep on M1) for a complete method to obtain all terms, half of which are correct (ft their first product) eg $2x^3 - 2x^2 + 3x^2 + 4x^2 - 3x - 4x + 6x - 6$ or $2x^3 - 2x^2 + 4x^2 - 4x + 3x^2 - 3x + 6x - 6$ or $2x^3 + 4x^2 + 3x^2 + 6x - 2x^2 - 4x - 3x - 6$ or $2x^3 + 4x^2 + x^2 - 3x + 2x - 6$ or $2x^3 + 2x^2 + 3x^2 - 4x + 3x - 6$ or $2x^3 - 2x^2 + 7x^2 - 7x + 6x - 6$	First product must be quadratic with at least 3 terms but need not be simplified or may be simplified incorrectly
		C1	for $2x^3 + 5x^2 - x - 6$ from correct working	Accept $a = 2$ , $b = 5$ , $c = -1$ , $d = -6$ Condone $-1x$
14	27 720	P1	for $15 \times 14$ (= 210) or $12 \times 11$ (= 132) or $15 \times 12$ (= 180)	If values given as probabilities can award P marks only
		P1	for a complete method eg $15 \times 14 \times 12 \times 11$	If a correct product seen and divided (by 2 or 4 or 24) award P marks
		A1	cao	
			SCB1 for an answer of 342 if P0 awarded	

Paper: 1MA1	Paper: 1MA1/2H						
Question	Answer	Mark	Mark scheme	Additional guidance			
15 (a)	Region shown	B4 (B3	for a fully correct region identified for drawing three correct lines)	See diagram at end of mark scheme Can exclude $y = 3x - 2$ for B4 Condone solid lines for all marks Region can be identified by shading			
		(B2	for drawing two correct lines, must include at least one of $x + y = 5$ or $y = 3x - 2$ )	in or shading out Lines need to be long enough to enclose the region			
		(B1	for drawing $x = 2$ and $y = 1$ correctly <b>OR</b> for drawing $x + y = 5$ correctly <b>OR</b> for drawing $y = 3x - 2$ correctly)				
(b)	y < 3x - 2	B1	(dep on B1 in (a)) for $y < 3x - 2$ or ft their diagram if 1 line is redundant	Condone use of '=' or ' $\leq$ ' and $3x-2$			

Paper: 1MA1	Paper: 1MA1/2H						
Question	Answer	Mark	Mark scheme	Additional guidance			
16 (a)	4.9	P1	for beginning to work with scale factors				
			$\left  eg \left( \frac{h}{12} \right)^3 \text{ or } \left( \frac{12}{h} \right)^3 \text{ or } \frac{90}{1350} \left( = \frac{1}{15} \right) \text{ or } \frac{1350}{90} \left( = 15 \right) \text{ or } 90 : 1350 \text{ oe} \right $				
		P1	for equating scale factors eg $\left(\frac{h}{12}\right)^3 = \frac{90}{1350}$ or $\left(\frac{12}{h}\right)^3 = "15"$ or for				
			finding the linear scale factor, eg $\sqrt[3]{\frac{90}{1350}}$ or $\sqrt[3]{"15"}$ (= 2.46(6))				
		P1	for a complete method eg $\sqrt[3]{12^3 \times \frac{90}{1350}}$ or $12 \times \sqrt[3]{\frac{90}{1350}}$ or $\frac{12}{\sqrt[3]{15}}$				
		A1	for answers in the range 4.8 to 4.9				
(b)	$(15)^{\frac{2}{3}}$	B1	for $15^{\frac{2}{3}}$ or $(\sqrt[3]{15})^2$ or $\sqrt[3]{15^2}$ or $225^{\frac{1}{3}}$	If given in an acceptable form, then given as a decimal, isw and award			
17	$\frac{2}{3}$	M1	for correct substitution, eg $1.5 = k^{-1}$ oe or $\frac{1}{1.5}$				
	3	A1	oe but not $\frac{1}{1.5}$	Accept rounded or truncated to 2dp or better			

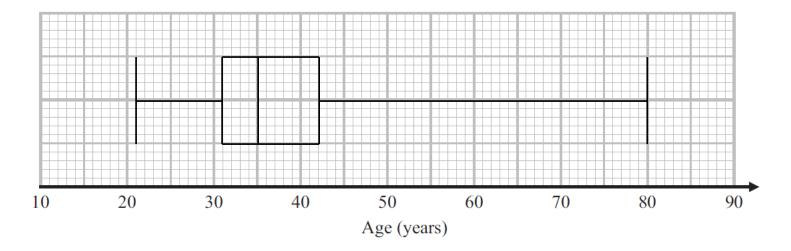
Paper: 1MA1/2H					
Question	Answer	Mark	Mark scheme	Additional guidance	
18	Shown	M1	for beginning to find $K$ eg $2400 = K \times 2000$ or $K = 1.2$ oe	M marks can be awarded in either order	
		M1	For a correct method to find the value for 2021 or 2022, eg $2400 \times "1.2" (= 2880)$ or $2400 \times ("1.2")^2 (= 3456)$ or	$1.2^2 = 1.44$	
			$2000 \times ("1.2")^2 = 2880$ or $2000 \times ("1.2")^3 = 3456$ OR method to find rate leading to 3000 in 2022, eg		
			$\sqrt[3]{\frac{3000}{2000}} \ (=1.144)$		
		C1	for comparative figures eg 3456 (and 3000) <b>OR</b> 3000 ÷ 2880 = 1.041 <b>and</b> 1.2 <b>OR</b> 1.144 <b>and</b> 1.2	3000 need not be restated to award this mark If comparison made with 2023 or beyond do not award C1	
19	17	P1	for a process to use trigonometry to find $BG = \frac{BG}{15} = \tan 27$ or $7.64(28)$	Other methods are possible for all P marks but only award the mark at the point of an equation with the correct length or angle as the only	
		P1	for a process to find to find $EG$ eg $\frac{15}{EG} = \cos 52$ or 24.3(64)	unknown	
		P1	for a process to use trigonometry to find angle <i>GEB</i> eg $\tan GEB = \frac{"7.64"}{"24.36"}$		
		A1	for an answer in the range 17 to 17.6		

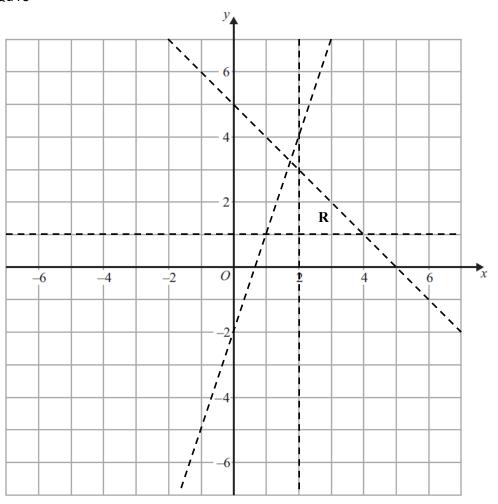
Paper: 1MA1	Paper: 1MA1/2H					
Question	Answer	Mark	Mark scheme	Additional guidance		
20	Shown	M1	for the method to find a coordinate of the point $D$ eg $\frac{1}{1+3} \times 16 \ (=4)$ or $\frac{3}{1+3} \times 8 \ (=6)$ or $(4,6)$ labelled	First two marks may be seen in either order Accept 4 or 6 stated or (6, 4)		
		M1	for a correct form for <b>L</b> , eg $y = \sqrt{3}x + c$ <b>OR</b> a correct equation for the gradient of <b>L</b> , eg $\frac{[6] - f}{[4] - 2} = \sqrt{3}$	Condone incorrect value for c when awarding this mark		
		M1	for correct substitution to find $c$ eg $[6] = \sqrt{3} \times [4] + c$ or $y - [6] = \sqrt{3}(x - [4])$ or $c = [6] - [4]\sqrt{3}(= -0.928)$ OR starts to rearrange equation for gradient, eg $[6] - f = ([4]2)\sqrt{3}$	[4] must be clearly identified as the <i>x</i> -coordinate of <i>D</i> if incorrect Award of this mark implies the previous mark [6] must be clearly identified as the <i>y</i> -coordinate of <i>D</i> if incorrect		
		M1	(dep on previous M1) for the method to substitute in -2, eg $\sqrt{3} \times (-2) + [6] - \sqrt{3} \times [4]$ or $\sqrt{3} \times (-2) + [c]$ OR a correct unevaluated expression for $f$ , eg $f = [6] - ([4] - 2)\sqrt{3}$	[c] must be clearly what they have found to be the y-intercept of <b>L</b> and must have come from correct processes to evaluate		
		C1	accurate figure eg $f = -4.39$ or $-4.39 < -4$	-4.39 must come from correct working Accept -4.4 or better		

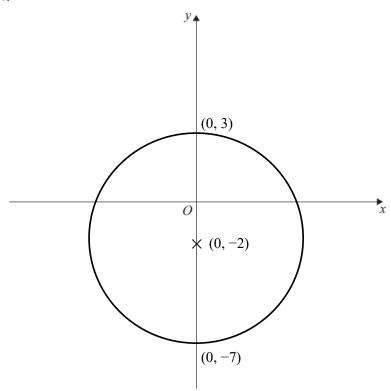
Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
21	$-\frac{2}{5} < x < \frac{1}{3}$	B2	for $-\frac{2}{5} < x < \frac{1}{3}$ oe	May be given as two separate inequalities
		(B1	For correct critical values of $-\frac{2}{5}$ and $\frac{1}{3}$ oe)	Accept -0.4 and 0.33 (or better)
22	Circle radius 5 centre $(0, -2)$ and $(0, 3)$ and $(0, -7)$	В3	for a correct sketch of a circle with centre $(0, -2)$ and intercepts $(0, 3)$ and $(0, -7)$ labelled	See diagram at end of scheme Allow freehand circles Ignore intersections with <i>x</i> axis for
	labelled	(B2	for a sketch of a circle with two of the 3 points indicated, or for a sketch of a circle with correct centre <b>and</b> radius of 5 labelled or stated)	all marks Accepts points marked with correct y-coordinate, eg -2 on y-axis for
		(B1	for a sketch of a circle with the correct centre <b>or</b> states correct centre <b>and</b> radius, but does not sketch)	centre

Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
23	73	P1	for process to work with cosine eg $(DB^2 = )12^2 + 9^2 - 2 \times 12 \times 9 \times \cos 60 = 117$	
		P1	for a correct order of operations to find DB, eg $\sqrt{225-216\times\cos 60}$ or $\sqrt{"117"}$ (=10.8)	$\sqrt{117} = 3\sqrt{13}$ Can be implied by correct use in subsequent calculations
		P1	for working with sine rule and $60^{\circ}$ eg $\frac{\sin CBD}{9} = \frac{\sin 60}{[DB]}$ or $\sin CBD = 0.720$ or $CBD = 46.10$	3 <sup>rd</sup> and 4 <sup>th</sup> P1 can be awarded in any order [DB] must be clearly identified but may not be correct, but cannot be 6 or 9 or 12
		P1	for working with sine rule and $125^{\circ}$ eg $\frac{\sin ABD}{6} = \frac{\sin 125}{[DB]}$ or $\sin ABD = 0.454$ or $ABD = 27.02$	CBD and ABD may be given as a variable, award marks unless contradicted
		A1	for answer within the range 72.5 to 73.5	

# Question 12a







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

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: ±5°

Measurements of length: ±5 mm

PAPER: 1MA1_2H					
Question	Modification	Mark scheme notes			
3	Wording changed: 'Look at the diagram for Question 3 in the Diagram Booklet. It shows a plan' m changed to metres.  Wording added: 'The triangle has a base of 16 metres and a height of 14 metres.'  Diagram enlarged. Open headed arrows.	Standard mark scheme			
4	Wording changed: 'Look at the diagram for Question 4 in the Diagram Booklet. It shows point C on a grid. 1 square length on the grid represents 1cm.' Wording added: 'in the Diagram Booklet' Diagram enlarged. Cross changed to a solid dot.	Standard mark scheme			
6	Wording changed: 'Two lists of numbers are shown below.' Braille: Wording changed 'Below are two lists of numbers'	Standard mark scheme			
7	Wording changed: 'Look at the diagram for Question 7 in the Diagram Booklet. It shows right-angled triangle ABC. AB = 7cm BC = 4cm Angle BCA = x° Angle ABC is a right angle.' Diagram enlarged. Angles moved outside of angle arcs and angle arcs made smaller.	Standard mark scheme			
9	Letter 'a' changed to 'p' and letter 'b' changed to 'q'	Standard mark scheme but note the change of letters			
11 (a)	Wording added: 'Look at the diagram for Question 11 in the Diagram Booklet. It shows an incomplete probability tree diagram.' Wording added: 'in the Diagram Booklet. There are four spaces to fill.' Diagram enlarged. Braille: Wording added 'by writing the missing values labelled (i) to (iv).'	Standard mark scheme but note change of letter			

12	(a)	Wording added: 'Look at the diagram for Question 12 in the Diagram Booklet. It shows a blank grid.' Wording added 'below'. Values in the table changed from 21, 80, 31, 42, 35 to 25, 60, 30, 45, 35 Wording added: 'on the blank grid in the Diagram Booklet.' Diagram enlarged. Open headed arrows. Grid cropped at 20 and 70. Braille: Wording added 'Drawing film and Bumpons are provided if you wish to use them.'	Standard mark scheme but note change of values
	(b)	'31' changed to '30' and '42' changed to '45'.	Standard mark scheme
15		Wording added: 'Look at the diagram for Question 15 in the Diagram Booklet. It shows a grid.' Last inequality changed to $y < 3x - 1$ Diagram enlarged. Open headed arrows. Vertical and horizontal axis cropped at -2 and 6 Braille: Wording changed: 'On the grid show the region R that satisfies all these inequalities. Shade or mark with a square bumpon the region.' Braille: Wording added 'Drawing film and Bumpons are provided if you wish to use them.'	Standard mark scheme but note change from $y < 3x - 2$ to $y < 3x - 1$
16		Wording changed: 'Look at the diagram for Question 16 in the Diagram Booklet.  It shows two jars that are mathematically similar. The smaller jar has volume 90 cm³ and height marked h cm. The larger jar has volume 1350 cm³ and height 12 cm.'  Diagram enlarged. Open headed arrows.  3D diagram removed and replaced with a 2D view.	Standard mark scheme
17		Wording changed: 'Look at the diagram for Question 17 in the Diagram Booklet. It shows a sketch' Diagram enlarged. Open headed arrows. Cross changed to a solid dot.	Standard mark scheme

19	Wording changed: 'Look at diagrams 1-4 for Question 19 in the Diagram Booklet. You may be provided with a model. They are NOT accurate. ABCDEFGH is a cuboid. The model shows faces CBGH, GFEH and CDEH with a frame work to show the other sides of the cuboid. There is a rod inside the model to show BE. Diagram 1 shows a 3D view of the cuboid. Diagram 2 shows face CBGH. Diagram 3 shows face GFEH. Diagram 4 shows the internal triangle GEB. On the diagrams, BH, GE and BE are shown with dashed lines. Diagram enlarged.  2D views added.  Model provided.  Braille: 3D diagram removed and replaced with 2D views.	Standard mark scheme
20	Wording added: 'Look at the diagram for Question 20 in the Diagram Booklet.' Letter 'f' changed to 'p'. Diagram enlarged. Open headed arrows.	Standard mark scheme but note change of letter
22	Wording added: 'Look at the diagram for Question 22 in the Diagram Booklet. It shows x and y axes crossing at the origin, O' Diagram enlarged. Open headed arrows. Braille: Wording changed 'Describe or sketch on the axes circle B.' Braille: Wording changed from 'Show' to 'Write'. Braille: Wording added 'Drawing film and Bumpons are provided if you wish to use them.'	Standard mark scheme
23	Wording changed: 'Look at the diagram for Question 23 in the Diagram Booklet. It shows quadrilateral ABCD.'  Wording added: BC = 12cm CD = 9cm DA = 6cm Angle BCD = 60° Angle DAB = 125°'  Diagram enlarged.  Angles moved outside of angle arcs and angle arcs made smaller.	Standard mark scheme