



GCSE MATHEMATICS 8300/2H

Higher Tier

Paper 2 Calculator

Shadow paper based on November 2023 paper

Mark scheme

November 2023

Version: 1.0 Final

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Glossary for Mark Schemes

GCSE examinations are marked in such a way as to award positive achievement wherever possible. Thus, for GCSE Mathematics papers, marks are awarded under various categories.

If a student uses a method which is not explicitly covered by the mark scheme the same principles of marking should be applied. Credit should be given to any valid methods. Examiners should seek advice from their senior examiner if in any doubt.

M	Method marks are awarded for a correct method which could lead to a correct answer.
A	Accuracy marks are awarded when following on from a correct method. It is not necessary to always see the method. This can be implied.
B	Marks awarded independent of method.
ft	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
SC	Special case. Marks awarded for a common misinterpretation which has some mathematical worth.
M dep	A method mark dependent on a previous method mark being awarded.
B dep	A mark that can only be awarded if a previous independent mark has been awarded.
oe	Or equivalent. Accept answers that are equivalent. eg accept 0.5 as well as $\frac{1}{2}$
[a, b]	Accept values between a and b inclusive.
[a, b)	Accept values $a \leq \text{value} < b$
3.14 ...	Accept answers which begin 3.14 eg 3.14, 3.142, 3.1416
Use of brackets	It is not necessary to see the bracketed work to award the marks.

Examiners should consistently apply the following principles.

Diagrams

Diagrams that have working on them should be treated like normal responses. If a diagram has been written on but the correct response is within the answer space, the work within the answer space should be marked. Working on diagrams that contradicts work within the answer space is not to be considered as choice but as working, and is not, therefore, penalised.

Responses which appear to come from incorrect methods

Whenever there is doubt as to whether a student has used an incorrect method to obtain an answer, as a general principle, the benefit of doubt must be given to the student. In cases where there is no doubt that the answer has come from incorrect working then the student should be penalised.

Questions which ask students to show working

Instructions on marking will be given but usually marks are not awarded to students who show no working.

Questions which do not ask students to show working

As a general principle, a correct response is awarded full marks.

Misread or miscopy

Students often copy values from a question incorrectly. If the examiner thinks that the student has made a genuine misread, then only the accuracy marks (A or B marks), up to a maximum of 2 marks are penalised. The method marks can still be awarded.

Further work

Once the correct answer has been seen, further working may be ignored unless it goes on to contradict the correct answer.

Choice

When a choice of answers and/or methods is given, mark each attempt. If both methods are valid then M marks can be awarded but any incorrect answer or method would result in marks being lost.

Work not replaced

Erased or crossed out work that is still legible should be marked.

Work replaced

Erased or crossed out work that has been replaced is not awarded marks.

Premature approximation

Rounding off too early can lead to inaccuracy in the final answer. This should be penalised by 1 mark unless instructed otherwise.

Continental notation

Accept a comma used instead of a decimal point (for example, in measurements or currency), provided that it is clear to the examiner that the student intended it to be a decimal point.

Q	Answer	Mark	Comments
1	$7x^3 + 35x$	B1	

Q	Answer	Mark	Comments
2(a)	$\frac{34}{25}$	B1	

Q	Answer	Mark	Comments
2(b)	400	B1	

Q	Answer	Mark	Comment	
3	13.3 ² or 176.89 and 15.6 ² or 243.36	M1	implied by 420.25 or 66.47 or $\sqrt{66.47}$ or 8.15... or 8.2	
	$\sqrt{13.3^2 + 15.6^2}$ or $\sqrt{176.89 + 243.36}$ or $\sqrt{420.25}$	M1dep		
	20.5	A1	oe	
	Additional Guidance			
	Correct answer with no working			M1M1A1
	20.5 with error seen is A0 eg $\sqrt{13.3^2 + 15.6^2} = \sqrt{420.3}$ Answer 20.5			M1M1A0
Answer from trigonometry or drawing			M0M0A0	

Q	Answer	Mark	Comments
4	140	B1	

Q	Answer	Mark	Comment
5	Alternative method 1: price of buying 8 from each shop		
	3.19×8 or 25.52	M1	oe shop A
	$3.82 \times 4 + 3.82 \div 2 \times 4$ or 22.92	M1	oe shop B
	$14.6(0) \div 5$ or 2.92 or $14.6(0) \times 2 \div 5$ or 5.84	M1	oe shop C
	$14.6(0) \times 2$ – their 2.92×2 or $14.6(0) \times 2$ – their 5.84 or 23.36	M1dep	oe dep on previous mark $14.6 \times \frac{4}{5} \times 2$ oe scores 3rd and 4th marks
	B and 22.92 with 25.52 and 23.36 seen	A1	
	Alternative method 2: compares price of individual batteries first		
	$3.82 \times 1.5 \div 2$ or 2.86(5) or 2.87	M1	oe shop B
	$(14.6(0) \div 4) \div 5$ or 0.73	M1	oe shop C
	$14.6(0) \div 4$ – their 0.73 or 2.92	M1dep	oe dep on previous mark $14.6(0) \times \frac{4}{5} \div 4$ oe scores 2nd and 3rd marks
	their 2.86(5) or 2.87×8 or 22.92	M1dep	oe
	B and 22.92 with 2.86(5) or 2.87 and 2.92 seen	A1	

Mark scheme continues on the next page

Q	Answer	Mark	Comment
5 cont	Alternative method 3: compares the price of 4 batteries first		
	3.19 × 4 or 12.76 and 3.82 × 1.5 × 2 or 11.46	M1	oe shops A and B
	14.6(0) ÷ 5 or 2.92	M1	oe shop C
	14.6(0) – their 2.92 or 11.68	M1dep	dep on previous mark 14.6(0) × $\frac{4}{5}$ oe scores 2nd and 3rd marks
	their 11.46 × 2 or 22.92 with M3 awarded	M1dep	oe
	B and 22.92 with 12.76 and 11.46 and 11.68 seen	A1	
	Alternative method 4: compares the price of 2 batteries first		
	3.19 × 2 or 6.38 and 3.82 × 1.5 or 5.73	M1	oe shops A and B
	(14.6(0) ÷ 2) ÷ 5 or 1.46	M1	oe shop C
	14.6(0) ÷ 2 – their 1.46 or 5.84	M1dep	dep on previous mark 14.6(0) × $\frac{4}{5}$ ÷ 2 oe scores 2nd and 3rd marks
	their 5.73 × 4 or 22.92	M1dep	oe
	B and 22.92 with 6.38 and 5.73 and 5.84 seen	A1	

Additional Guidance is on the next page

Additional Guidance																					
5 cont	Up to M4 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts																				
	Use the scheme which gives the highest mark																				
	NB The 4th mark in Alts 2, 3 and 4 does not imply any earlier marks Either the method or values must have been seen and awarded for the first 3 marks in order to give this mark However 22.92 always implies M1 by Alt 1																				
	If students use different numbers of batteries for different shops do not combine marks from different schemes But note that there are possible valid methods that compare eg 2 batteries from A and B and then 4 batteries from B and C																				
	All schemes can be oe in pence and allow work in a mix of pounds or pence for up to M4																				
	Allow $\times 0.2$ or $\times 20\%$ if seen for method for one fifth for shop C																				
	Allow $\times 0.8$ or $\times 80\%$ if seen for method for four-fifths for shop C																				
	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;">Shop</th> <th style="width: 20%;">Cost for 1</th> <th style="width: 20%;">Cost for 2</th> <th style="width: 20%;">Cost for 4</th> <th style="width: 20%;">Cost for 8</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>3.19</td> <td>6.38</td> <td>12.76</td> <td>25.52</td> </tr> <tr> <td>B</td> <td>2.86(5) or 2.87</td> <td>5.73</td> <td>11.46</td> <td>22.92</td> </tr> <tr> <td>C</td> <td>2.92</td> <td>5.84</td> <td>11.68</td> <td>23.36</td> </tr> </tbody> </table>	Shop	Cost for 1	Cost for 2	Cost for 4	Cost for 8	A	3.19	6.38	12.76	25.52	B	2.86(5) or 2.87	5.73	11.46	22.92	C	2.92	5.84	11.68	23.36
	Shop	Cost for 1	Cost for 2	Cost for 4	Cost for 8																
A	3.19	6.38	12.76	25.52																	
B	2.86(5) or 2.87	5.73	11.46	22.92																	
C	2.92	5.84	11.68	23.36																	

Q	Answer	Mark	Comment
6(a)	4	B1	

Q	Answer	Mark	Comment
6(b)	No and correct reason	B1	eg no and this gives percentage (not angle) no and it should be $\times 360$ (not 100) no and it should be 144°
	Additional Guidance		
	Yes indicated		B0
	If neither box is ticked then No may be implied by the reason eg She hasn't used 360° for the circle		B1
	Ignore irrelevant, non-contradictory statements		
	Do not ignore incorrect calculations or evaluations of the angle, or incorrect statements		
	No and this is 40%		B1
	No and she still needs to work out 40% of 360		B1
	No and a circle is 360°		B1
	No and angles in a pie chart are 360		B1
	No and she needs to divide 360 by 2.5		B1
	No, shouldn't have \times by 100		B0
	No, she should have divided 360 / divided by 360		B0
	No and a circle has 360 not 180		B0
No and it's not big enough		B0	

Q	Answer	Mark	Comment
7	Correct method or evaluation of the area of any face or correct method or evaluation of the volume of any relevant cuboid of length 5 cm	M1	eg 3×2 or 6 or 3×3 or 9 or 3×4 or 12 or 5×3 or 15 or $5 \times 2 + 3 \times 2$ or $10 + 6$ or 16 or $2 \times 3 \times 5$ or 30 or $3 \times 2 \times 3$ or 18 or $2 \times 2 \times 3$ or 12 or $5 \times 3 \times 4$ or 60
	Correct method for volume of prism	M1dep	eg $2 \times 3 \times 5 + 3 \times 2 \times 3$ or $30 + 18$ or 16×3
	48	A1	
	Additional Guidance		
	The first M1 may be awarded even if this is seen amongst multiple attempts		

Q	Answer	Mark	Comment
8	4×34 or 136 or 101	M1	may be seen embedded in an expression, equation or calculation eg $4 \times 34 + 50.5x = 237$
	$\frac{237 - 4 \times 34}{50.5}$ or $(237 - 136) \div 50.5$ or $101 \div 50.5$ or 2 (hours)	M1dep	oe eg $50.5 \times 2 = 101$ implied by total of 6 (hours)
	$237 \div (4 + \text{their } 2)$ or $237 \div 6$	M1dep	
	39.5	A1	accept 40 with M3 awarded
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		

Q	Answer	Mark	Comment
9	$8a + 51$	B1	oe eg $2(4a + 23) + 5$
	$15a + 85$	B1ft	correct or ft B0 only their $8a + 51$ must be in the form $na + c$ where $n \neq 0$ and $c \neq 0$ implied by $5(3a + 17)$
	$5(3a + 17)$ or $15 = 3 \times 5$ and $85 = 17 \times 5$	B1	oe $3a + 17$ so it divides by 5
	Additional Guidance		
	Ignore use of substitution as an attempt to show divisibility		
	Ignore further non-contradictory statements		
	For the 1st B1 accept $8a + 51$ embedded in a calculation for the sum of the first four terms eg $a + 2 + 2a + 9 + 4a + 23 + 8a + 51$		
	For the 2nd B1 accept $15a + 85$ embedded in a calculation to show divisibility eg $\frac{15a+85}{5} = 3a+17$		
	For the 3rd B1 accept 15 is a multiple of 5 and 85 is a multiple of 5		
	$8a + 51$ $a + 2a + 4a + 8a = 15a$ $2 + 9 + 23 + 51 = 85$ but $15a + 85$ not seen $15 = 3 \times 5$ and $85 = 17 \times 5$		B1 B0 B1

Q	Answer	Mark	Comments
10	$A' \cap B$	B1	

Q	Answer	Mark	Comments
11	5	B1	

Q	Answer	Mark	Comments
12	20×1.4 or 28 or 30×1.95 or 58.5	M1	oe
	$\frac{20 \times 1.4 + 30 \times 1.95}{20 + 30}$ or $\frac{173}{100}$	M1dep	oe
	1.73	A1	oe allow 1.7 with M2 seen
	Additional Guidance		
	The first M1 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
Answer only 1.7			M0M0A0

Q	Answer	Mark	Comment
13	Alternative method 1		
	$\frac{31-16}{7-2}$ or $\frac{15}{5}$ or $(m =) 3$	M1	oe eg $\frac{16-31}{2-7}$ implied by $y = 3x$
	$16 = \text{their } 3 \times 2 + c$ or $31 = \text{their } 3 \times 7 + c$ or $(m =) 3$ and $c = 10$ or $y - 16 = \text{their } 3(x - 2)$ or $y - 31 = \text{their } 3(x - 7)$	M1dep	oe
	$y = 3x + 10$	A1	

Mark scheme continues on the next page

Q	Answer	Mark	Comment
13 cont	Alternative method 2		
	$16 = 2m + c$ and $31 = 7m + c$ and $31 - 16 = 7m - 2m$ or $m = 3$ or $112 = 14m + 7c$ and $62 = 14m + 2c$ and $112 - 62 = 7c - 2c$ or $c = 10$	M1	oe correct method to work out m or c using simultaneous equations
	Correct substitution of their m into one of the original equations or correct substitution of their c into one of the original equations or $m = 3$ and $c = 10$	M1dep	
	$y = 3x + 10$	A1	

Q	Answer	Mark	Comments
14	Arc, centre P , radius [5.8, 6.2] cm	B1	from use of compasses mark intention
	Two intersecting arcs with equal radii, centres P and Q	M1	tolerance 2 mm
	Perpendicular bisector of PQ with M1 seen	A1	
	Correct region shown (arcs for bisector not required)	B1	allow any clear indication of region
	Additional Guidance		
	Arc, centre P , radius [5.8, 6.2] cm and correct region indicated but arcs for bisector not seen		B1M0A0B1
	For A1 the perpendicular bisector of PQ must be long enough to provide the straight boundary of the correct region		
Ignore redundant or incorrect lines/arcs			

Q	Answer	Mark	Comments
15(a)	0.4 × 100 or 40 or 0.36 × 150 or 54	M1	oe may be seen by the table
	14	A1	
	Additional Guidance		
	The first M1 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		

Q	Answer	Mark	Comments
15(b)	132	B1	

Q	Answer	Mark	Comments
16	$x - y > 0$	B1	

Q	Answer	Mark	Comments
17(a)	230 – 56 or 124 – 56 or 194 – 124 or 230 – 194 or 68 or 70 or 36	M1	oe May be seen in table
	174	A1	

Q	Answer	Mark	Comments
17(b)	Valid criticism involving final plot	B1	eg (50, 220) should be (50, 230)
	Valid criticism involving vertical axis label	B1	eg frequency should be cumulative frequency

Q	Answer	Mark	Comments
18	$(x + 4)^2 \dots$	M1	
	$(x + 4)^2 + 2$	A1	
	$(x + 4)^2 + 2$ and valid argument	A1	eg $(x + 4)^2 + 2$ and $(x + 4)^2 \geq 0$ and adding 2 or $(x + 4)^2 + 2$ and this is ≥ 2 or correct reference to a minimum point and its position about the x -axis
	Additional Guidance		
	$(x + 4)^2 + 2$ and Even if x is negative it is squared so will be positive so the expression is always positive (no reference to the + 2)		M1A1A0
	$(x + 4)^2 + 2$ and Turning point is $(-4, 2)$ which is positive on the y -axis and as x^2 coefficient it is a U-shape therefore always positive		M1A1A1
	In correct working after $(x + 4)^2 + 2$ seen eg $(x + 4)^2 + 2 = 0$		M1A1A0
	Condone $>$ for \geq		

Q	Answer	Mark	Comments
19	No and valid reason	B1	eg no and 32 (times bigger)
	Additional Guidance		
	No and it is to the power 5 not times by 5 (unclear that 'it' is 2)		B0
	No and $2^5 = 32$ (shows the correct calculation)		B1
	No and $(2B)^5 = 32B^5$		B1

Q	Answer	Mark	Comments	
20	$y(2 - x) = 3x + 2$	M1		
	$2y - xy = 3x + 2$	M1dep		
	$2y - 2 = 3x + xy$ or $2y - 2 = x(3 + y)$ or $\frac{2y - 2}{3 + y}$	M1dep	oe collection of terms in x eg $-3x - xy = 2 - 2y$ oe	
	$x = \frac{2y - 2}{3 + y}$ or $\frac{2y - 2}{3 + y} = x$	A1	oe	
	Additional Guidance			
	Up to M3 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts			
	Condone $x = \frac{2y - 2}{3 + y}$ in working with $\frac{2y - 2}{3 + y}$ on answer line			M1M1M1A1
	$x = \frac{2y - 2}{3 + y}$ followed by incorrect further work			M1M1M1A0
$y(2 - x)^2 = 3x + 2$			M0M0M0A0	

Q	Answer	Mark	Comments
21	Alternative method 1		
	1475 or 1425 or 185 or 175	M1	
	their 1475 + their 185 or 1660 and 1475 and 185	M1	must add two upper bounds their 1475 must be (1450, 1500] their 185 must be (180, 190]
	1660 and Yes and 1475 and 185	A1	
	Alternative method 2		
	1475 or 1425 or 185 or 175	M1	
	1680 – their 1475 or 1680 – their 185	M1	their 1475 must be (1450, 1500] their 185 must be (180, 190]
	185 and 205 and Yes or 1475 and 1495 and Yes	A1	
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
	Note that M0M1A0 is possible eg 1474 + 184		M0M1A0
	Accept correct use of decimals eg 1474.9		
	Yes may be implied eg The shelf can be added		

Q	Answer	Mark	Comments
22	$(4x + y)(4x - y)$	B1	brackets in either order
	Additional Guidance		
	Condone missing final bracket eg $(4x + y)(4x - y$	B1	
	Condone multiplication sign eg $(4x + y) \times (4x - y)$	B1	
	Accept $(-4x + y) \times (-4x - y)$	B1	

Q	Answer	Mark	Comments
23(a)	$\frac{1}{2} \times 10 \times 20$ or 100 or $\frac{1}{2} \times (20 + [32, 33]) \times 10$ or [260, 265] or $\frac{1}{2} \times ([32, 33] + 25) \times 10$ or [285, 290] or $\frac{1}{2} \times (25 + 10) \times 10$ or 175	M1	oe eg $16 \times 10 + \frac{1}{2} \times (27 - 16) \times 10$
	At least three of $\frac{1}{2} \times 10 \times 20$ or 100 and $\frac{1}{2} \times (20 + [32, 33]) \times 10$ or [260, 265] and $\frac{1}{2} \times ([32, 33] + 25) \times 10$ or [285, 290] and $\frac{1}{2} \times (25 + 10) \times 10$ or 175	M1dep	oe M2 $\frac{1}{2} \times 10 \{0 + 10 + 2(20 + [32, 33] + 25)\}$ oe
	[820, 830]	A1	
	Additional Guidance		
	The first M1 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
	Values may be seen on the diagram		
Answer 850 and extra strips used		M1M1A1	

Q	Answer	Mark	Comments
23(b)	$\frac{10}{40}$ or $\frac{1}{4}$ or 0.25	B1	
	m/s^2 or $m/s/s$ or ms^{-2}	B1	oe eg metres per second per second
	Additional Guidance		
	Ignore incorrect simplification or conversion after correct answer seen		

Q	Answer	Mark	Comments
24	Alternative method 1		
	$2(3x^2 + 1)$ or $7(3x^2 + 1)$ or $\frac{6x^2 + 2}{9} \times \frac{8}{21x^2 + 7}$	M1	
	$\frac{2(3x^2 + 1)}{9x} \times \frac{8x}{7(3x^2 + 1)}$ or $\frac{2(3x^2 + 1)}{9} \times \frac{8}{7(3x^2 + 1)}$ or $\frac{2}{9x} \times \frac{8x}{7}$	M1dep	$\frac{2}{9x} \times \frac{8x}{7}$ must follow $2(3x^2 + 1)$ and $7(3x^2 + 1)$
	$\frac{16}{63}$	A1	
	Alternative method 2		
	$\frac{48x^3 + 16x}{189x^3 + 63x}$ or $\frac{x(48x^2 + 16)}{x(189x^2 + 63)}$ or $\frac{48x^2 + 16}{189x^2 + 63}$	M1	
	$\frac{16x(3x^2 + 1)}{63x(3x^2 + 1)}$ or $\frac{16(3x^3 + x)}{63(3x^3 + x)}$ or $\frac{16(3x^2 + 1)}{63(3x^2 + 1)}$	M1dep	
	$\frac{16}{63}$ with M2 seen	A1	
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		

Q	Answer	Mark	Comments
25	$\frac{24}{16}$ or $\frac{3}{2}$ or 1.5 or $\frac{16}{24}$ or $\frac{2}{3}$ or 0.66(...) or (ratio of lengths are) 16 : 24	M1	oe
	$\left(\frac{24}{16}\right)^3$ or $\left(\frac{3}{2}\right)^3$ or 1.5^3 or $\left(\frac{16}{24}\right)^3$ or $\left(\frac{2}{3}\right)^3$ or $0.66(\dots)^3$ or (ratio of volumes are) $16^3 : 24^3$	M1dep	oe eg $\frac{27}{8}$ or 3.375 or $\frac{8}{27}$ or 0.296 oe eg $2^3 : 3^3$
	21.6(0) \div 1.5^3 or 21.6(0) \times $0.66(\dots)^3$ or 6.4	M1dep	oe
	6.40	A1	SC2 72.9(0)
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
	21.6(0) \times 1.5^3 or 21.6(0) \div $0.66(\dots)^3$		M1M1M0A0
	1.5^2 or $0.66(\dots)^2$		M1M0M0A0

Q	Answer	Mark	Comments
26	$1.03 \times 2000 - 120$ or 1940	M1	oe
	$1.03 \times$ their 1940 – 120 or 1878.2	M1dep	oe
	1878.20	A1	SC2 1814.54(6) or 1814.55
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
	Further work after 1878.2(0) seen		

Q	Answer	Mark	Comments
27	$10 = a \times b^0$ or $a = 10$	M1	oe
	$160 =$ their $10 \times b^2$	M1dep	oe
	$\sqrt{\frac{160}{\text{their } 10}}$ or $b = \sqrt{6}$ or 4	M1dep	oe
	40	A1	
	Additional Guidance		
	The first M1 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		

Q	Answer	Mark	Comments
28	$\cos 65 = \frac{12}{x}$	M1	oe eg $\frac{x}{\sin 65} = \frac{24}{\sin 50}$ x can be any letter or PB or PA or PC or PD
	$\frac{12}{\cos 65}$	M1dep	oe eg $\frac{24 \times \sin 65}{\sin 50}$
	28.3(9...) or 28.4	A1	accept 28 with M1 awarded
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		

Q	Answer	Mark	Comments
29	Alternative method 1		
	$6 \times 6 \times 6$ or 216 or $6 (\times 1) \times 5$ or 30	M1	oe
	186	A1	
	Alternative method 2		
	$6 (\times 1 \times 1)$ or 6 and $6 \times 5 (\times 1)$ or 30 and $6 \times 5 \times 4$ or 120	M1	oe $6 \times 5 (\times 1)$ or 30 may appear twice
	186	A1	
	Additional Guidance		
	The first M1 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
	$6 \times 5 (\times 1)$ or 30		M1