Functional Skills Level 1
MATHEMATICS
8361/2

Paper 2 Calculator

Mark scheme

January 2023

Version: 1.0 Final

231A8361/2/MS

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.

Further copies of this mark scheme are available from aqa.org.uk

Glossary for Mark Schemes

Functional Skills examinations are marked in such a way as to award positive achievement wherever possible. Thus, for Functional Skills 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 ≤ 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		B1	accept line of symmetry drawn on correct shape if no others drawn.

Q	Answer	Mark	Comments
2	2.702, 2.6(00), 2.45(0), 2.035	B2	B1 reverse order or one value in incorrect position
	Additional Guidance		
	eg 2.702, 2.035, 2.6, 2.45		B1
	eg 2.702, 2.45, 2.6, 2.035		B1
	Allow misread if order not affected		

Q	Answer	Mark	Comments
3	3071	B1	
	Additional Guidance		
	Ignore punctuation eg 3,071		

Q	Answer	Mark	Comments
4	West	B1	accept W
	Additional Guidance		
	Ignore other non-contradictory words if West seen eg anticlockwise West		B1
	Condone incorrect spelling if intention is clear		

<table>
<tr><th>Q</th><th>Answer</th><th>Mark</th><th>Comments</th></tr>
<tr><td rowspan="5">5</td><td>$\frac{65}{100}$ or $\frac{13}{20}$</td><td>B1</td><td>oe fraction</td></tr>
<tr><td>70(%)</td><td>B1</td><td></td></tr>
<tr><td colspan="3">Additional Guidance</td></tr>
<tr><td colspan="2"><table><tr><th>Fraction</th><th>Decimal</th><th>Percentage</th></tr><tr><td>$\frac{65}{100}$</td><td>0.65</td><td>65%</td></tr><tr><td>$\frac{7}{10}$</td><td>0.7</td><td>70(%)</td></tr></table></td><td>B1B1</td></tr>
<tr><td colspan="2">Ignore incorrect cancelling if correct fraction seen
eg $\frac{65}{100} = \frac{6}{10}$ scores B1 for initial correct fraction</td><td></td></tr>
<tr><td colspan="2">$\frac{6.5}{10}$ only</td><td>B0</td></tr>
</table>

<table>
<tr><th>Q</th><th>Answer</th><th>Mark</th><th>Comments</th></tr>
<tr><td rowspan="6">6</td><td>Tallies correct including 5 bar gate</td><td>B1</td><td>correct tallies for 8, 5, 5, 2</td></tr>
<tr><td>Frequencies correct</td><td>B1ft</td><td>ft their tallies if given</td></tr>
<tr><td colspan="3">Additional Guidance</td></tr>
<tr><td colspan="2">Correct table
<table>
<tr><th>Value</th><th>Tally</th><th>Frequency</th></tr>
<tr><td>1–3</td><td>𝍸 |||</td><td>8</td></tr>
<tr><td>4–6</td><td>𝍸</td><td>5</td></tr>
<tr><td>7–9</td><td>𝍸</td><td>5</td></tr>
<tr><td>10–12</td><td>||</td><td>2</td></tr>
</table></td><td></td></tr>
<tr><td colspan="2">Frequencies in tally column if no tallies seen</td><td>B0B1</td></tr>
<tr><td colspan="2">Relative frequencies in frequency column with frequencies is choice
eg1
<table>
<tr><th>Value</th><th>Tally</th><th>Frequency</th></tr>
<tr><td>1–3</td><td>𝍸 |||</td><td>8 $\frac{8}{20}$</td></tr>
<tr><td>4–6</td><td>𝍸</td><td>5 $\frac{5}{20}$</td></tr>
<tr><td>7–9</td><td>𝍸</td><td>5 $\frac{5}{20}$</td></tr>
<tr><td>10–12</td><td>||</td><td>2 $\frac{2}{20}$</td></tr>
</table></td><td>B1B0ft</td></tr>
</table>

Q	Answer	Mark	Comments
7	8 × 9 or 72 or 5 × 3 or 15 or 8 × 6 or 48 or 13 × 3 or 39 or 13 × 9 or 117 or 6 × 5 or 30 or 8 × 3 or 24	M1	must not be seen as part of a long multiplication string
	8 × 9 + 5 × 3 or 72 + 15 or 8 × 6 + 13 × 3 or 48 + 39 or 13 × 9 – 6 × 5 or 117 – 30 or 8 × 6 + 8 × 3 + 5 × 3 or 48 + 24 + 15	M1dep	
	87	A1	
	Additional Guidance		
	Ignore any units		
	Some of the values may come from incorrect working eg 8 + 9 + 13 = 30		M0

Q	Answer	Mark	Comments
8 (a)	**Alternative method 1**		
	30 (mins) + 30 (mins) + 2 (hrs) or 3 (hours) or 180 (mins)	M1	oe
	their 3 × 15.75 or 47.25	M1	oe their 3 must be [2, 5] must convert their mins to hrs
	their 47.25 + 32 or 79.25 or 80 – their 47.25 or 32.75	M1dep	dep on previous M1
	79.25 and Yes or 32.75 and Yes or She has 75p left	A1	oe
	Alternative method 2		
	30 (mins) + 30 (mins) + 2 (hrs) or 3 (hours) or 180 (mins)	M1	oe
	their 3 × 15.75 or 47.25	M1	oe their 3 must be [2, 5] must convert their mins to hrs
	80 – 32 or 48	M1	
	47.25 and 48 and Yes or She has 75p left	A1	oe

Mark scheme and Additional Guidance continues on next page

8 (a) Cont'd	**Alternative method 3**		
	30 (mins) + 30 (mins) + 2 (hrs) or 3 (hours) or 180 (mins)	M1	oe
	80 – 32 or 48	M1	
	their 48 ÷ 15.75 or 3.04… or 3.05	M1dep	dep on previous M1
	3 (hours) and 3.04… or 3.05 and Yes	A1	oe
	Alternative method 4		
	30 (mins) + 30 (mins) + 2 (hrs) or 3 (hours) or 180 (mins)	M1	oe
	80 – 32 or 48	M1	
	their 48 ÷ their 3 or (£)16	M1dep	dep on M2
	3 (hours) and (£)16 and Yes	A1	

Mark scheme and Additional Guidance continues on next page

	Additional Guidance	
8 (a) Cont'd	Ignore further working to calculate amount left if correct total and decision given	
	For build-up methods to 47.25 accept rounding of 7.875 to 7.87 or 7.88 eg Set up = 30mins = 0.5hr, 0.5 × 15.75 = 7.875 Party = 2hrs, 2 × 15.75 = 31.5 Tidy up = 30mins = 0.5hr, 0.5 × 15.75 = 7.875 Cost = 7.875 + 31.5 + 7.87 = 47.25	M1M1
	Embedded 32 must be used accurately eg1 3 × 15.75 = 47.25 15.75 + 32 = 47.75 47.25 + 47.75 = 95 eg2 30mins + 30mins = 1hr, 1 × 15.75 = 15.75 Party = 3hrs, 3 × 15.75 = 47.25 47.25 + 15.75 + 32 = 95 eg3 15.75 + 32 = 47.75 3 × 47.75 = 143.25	M1 M1 M0 A0 M0M1 M1A0 M1M1M0A0

Q	Answer	Mark	Comments
8(b)	**Alternative method 1**		
	30 × 3 ÷ 8 or 11.2(5) or 11.3	M2	oe accept 11 remainder 2 M1 3 ÷ 8 or 0.375 or 30 ÷ 8 or 3.75 or 3 × 30 or 90
	12	A1	
	Alternative method 2		
	3 × 30 or 90	M1	
	11 × 8 or 88 or 12 × 8 or 96	M1	oe eg may list multiples of 8 up to at least 88
	12	A1	
	Alternative method 3		
	3 pizzas for 8 people	M1	
	3 × 4 pizzas for 8 × 4 people	M1	oe 8 × 4 (or 32) must be for people not slices
	12	A1	
	Alternative method 4		
	8 ÷ 3 or $2\frac{2}{3}$ or [2.6, 2.7]	M1	may be implied by 1 pizza feeds 2 people with 2 slices left
	30 ÷ their $2\frac{2}{3}$ or [11.1,11.54]	M1dep	oe their $2\frac{2}{3}$ must be [2.6, 2.7]
	12	A1	

Additional Guidance continues on next page

	Additional Guidance	
8(b) Cont'd	Up to M2 may be awarded for correct work with no answer, or incorrect answer, even amongst multiple attempts.	
	Working may be seen on diagrams	
	Ignore comments about number of slices left if 12 seen	

Q	Answer	Mark	Comments
8 (c)	**Alternative method 1**		
	280 × 30 or 8400	M1	
	2 × 1000 × (1 + 4) or 10 000	M2	oe M1 2 × 1000 or 2000 or 2 × 4 × 1000 or 8000 or 2 × (1 + 4) or 10
	8400 and 10 000 and Yes	A1	
	Alternative method 2		
	280 ÷ 1000 × 30 ÷ (1 + 4) or 1.68(0)	M3	M2 for any two correct operations eg implied by 8.4 or 0.056 or 1680 or 0.006 or 0.28 and 6 or 8400 and 5000 or 56 and 0.03 M1 for one correct operation eg 0.28, 6, 8400, 5000, 56, 0.03
	1.68(0) and Yes or 0.32 (litres) left	A1	allow 1.6 from correct method

Mark scheme and Additional Guidance continues on next page

8 (c) cont'd	**Alternative method 3**		
	2 × (1 + 4) or 10	M1	oe
	280 × 30 ÷ 1000 or 8.4 or their 10 ÷ 30 or 0.33(3…) and 280 ÷ 1000 or 0.28(0)	M2	M1 280 × 30 or 8400 or 280 ÷ 1000 or 0.28(0) or their 10 ÷ 30 or 0.33(3...)
	10 and 8.4 and Yes or 0.33(3…) and 0.28(0) and Yes	A1	oe eg 8 litres 400 ml
	Alternative method 4		
	2 × 1000 × (1 + 4) or 10 000	M2	oe M1 2 × 1000 or 2000 or 2 × 4 × 1000 or 8000 or 2 × (1 + 4) or 10
	their 10 000 ÷ 30 or 333.(…) or their 10 000 ÷ 280 or 35.(…)	M1	their 10 000 must not be 280
	333.(…) and Yes or 35.(…) and Yes	A1	
	Alternative method 5		
	280 ÷ (1 + 4) or 56	M1	
	2 × 1000 or 2000	M1	
	their 2000 ÷ their 56 or 35.(…)	M1	oe
	35.(…) and Yes	A1	

Mark scheme and Additional Guidance continues on next page

8 (c) Cont'd	**Alternative method 6**		
	280 × 30 or 8400 or 280 ÷ (1 + 4) or 56	M1	
	their 8400 ÷ (1 + 4) or their 56 × 30 or 1680	M1dep	
	2 × 1000 or 2000 or their 1680 ÷ 1000 or 1.68(0)	M1	
	1680 and 2000 and Yes or 1.68(0) and Yes or 320 (ml) left	A1	allow 1.6 from correct method
	Additional Guidance		
	Ignore any further working once answer seen. Check for decision.		
	Note 280 ÷ 2 = 140, 140 ÷ 4 = 35		M0M0M0A0

Q	Answer	Mark	Comments
9 (a)	**Alternative method 1**		
	5.4 × 0.15 or 0.81	M1	oe may work in grams throughout
	5.4 + their 0.81 or 6.21 or 6.1 – their 0.81 or 5.29	M1dep	5.4 × 1.15 is M2
	6.21 and No or 5.29 and No	A1	accept 6210 or 5290 if working in grams
	Alternative method 2		
	5.4 × 0.15 or 0.81	M1	oe may work in grams throughout
	6.1 – 5.4 or 0.7	M1	
	0.81 and 0.7 and No	A1	accept 810 and 700 if working in grams
	Alternative method 3		
	6.1 – 5.4 or 0.7	M1	may work in grams throughout
	their 0.7 ÷ 5.4 × 100 or 12.9(…)	M1dep	must be consistent units
	12.9(…) and No	A1	allow 13 with correct method
	Alternative method 4		
	1.15 seen	M1	
	6.1 ÷ 1.15 or 5.3(0…)	M1dep	
	5.3(0…) and No	A1	
	Additional Guidance		
	Up to M1 may be awarded for correct work with no answer, or incorrect answer, even amongst multiple attempts.		

Q	Answer	Mark	Comments
9 (b)	**Alternative method 1 (bar chart or vertical line graph)**		
	Chooses bar chart or vertical line graph	B1	at least one bar or one vertical line must be seen
	Frequency axis has linear scale starting from zero up to at least 10	B1	for bar chart the frequency may be on the horizontal or vertical axis condone zero not labelled labelling/notches for values must be at the top of each square
	All heights correct for their increasing scale or heights in correct proportion if no scale is given	B1ft	ft their scale ±½ square for labelling in the middle of squares count the 'blocks' eg heights 10 cm, 6 cm and 4 cm
	Fully correct labelling for their type of graph Number of Pets on frequency axis **and** Pet labels on the other axis or on the bars **and** equal width bars and equal gaps or no gaps between them	B1	oe allow abbreviations condone different gap between axis and first bar

Mark scheme and Additional Guidance continues on next page

9 (b) Cont'd	**Alternative method 2 (pictogram)**		
	Chooses pictogram	B1	
	Suitable key with icon and scale	B1	a suitable key is one that can be split equally into 4, 6 and 10
	Fully correct pictogram with all rows correct and equal spaces between rows and icons	B2ft	ft their key mark broad intention to align icons B1ft at least one row drawn correctly for their key
	Alternative method 3 (pie chart)		
	Chooses pie chart	B1	
	$\frac{10}{20} \times 360$ or 10×18	M1	oe correct method shown for one angle implied by one correct angle seen or drawn
	All 3 sectors drawn to correct size 180, 108 and 72	A1	± 2°
	3 sectors drawn and labelled in correct order of size	B1	
	Additional Guidance		
	Accept D, C, R for the labels but not 10, 6, 4		
	Label for Type of Pet is not required on the axis		
	If bars are labelled for the wrong type of pet, award heights mark if all three correct heights are seen but do not award label mark		
	In **Alt 1**, heights may be plotted with crosses. If the crosses are at the top of vertical lines, then the mark for suitable diagram can be awarded. However, if heights are plotted with crosses but have no lines, or are joined together, then all marks except the B1 for suitable diagram can be accessed. Gaps between the crosses must be equal.		
	For a pie chart the correct angles are 180° for Dog, 108° for Cat and 72° for Rabbit Labelling mark can be awarded for any pie chart with 3 sectors only, in order of size labelled Dog, Cat and Rabbit		
	The scale on the frequency axis must be linear throughout its length		

Q	Answer	Mark	Comments
9 (c)	45 × 30 × 40 or 54 000	M1	
	their 54 000 ÷ 1000 or 54	M1	their 54 000 must come from a combination of the tank lengths
	their 54 × 2	M1dep	dep on previous M1
	108	A1	
	Additional Guidance		
	Ignore units in working		

Q	Answer	Mark	Comments
10(a)	$\frac{168}{9.6(0)} \div 7$	M2	oe fully correct method answer 2 hrs 30 mins implies M2 M1 9.6(0) × 7 or 67.2(0) or 168 ÷ 9.6(0) or 17.5 or 168 ÷ 7 or 24
	2.5(0)	A1	ignore attempted conversion to another format if 2.5 seen
	Additional Guidance		
	eg 9.6 × 2 = 19.2, 19.2 × 7 = 134.4, 4.8 × 7 = 33.6 134.4 + 33.6 = 168, so 2 hrs 30mins		M2A0
	eg1 168 ÷ 7 = 24 9.60 × 2 = 19.2 and 9.60 ÷ 2 = 4.8 19.2 + 4.8 = 24, so 2 hrs 30 mins		M2A0
	eg2 168 ÷ 7 = 24 24 ÷ 9.6 = 2.5 so 2.30		M2A0
	eg3 168 ÷ 7 = 24 24 ÷ 9.6 = 2hrs 5mins		M2A0

Q	Answer	Mark	Comments
10 (b)	3.8(0) ÷ 2 or 1.9(0) or 3.8(0) × 1.5 or 5.7(0)	M1	oe
	2.99 + 2.25 + 3.8(0) + their 1.9(0) or 10.94	M1	oe their 1.9(0) must be less than 3.8(0) and not 2.99 or 2.25
	20 – their 10.94	M1	their 10.94 must be the sum of four items
	9.06	A1	condone 9.06p, 9:06 and 09.06 SC2 7.16 or 12.86 SC1 12.84 or 7.14
	Additional Guidance		
	2.99 + 2.25 + 3.80 + 3.80 = 12.84 20 – 12.84 = 7.16		SC2
	2.99 + 2.25 + 3.80 + 3.80 = 12.84		SC1
	2.99 + 2.25 + (3.80 ÷ 2) = 7.14 20 – 7.14 = 12.86		SC2
	2.99 + 2.25 + (3.80 ÷ 2) = 7.14		SC1

Q	Answer	Mark	Comments
10 (c)	**Alternative method 1**		
	45 + 64 + 74 + 41 + 83 + 120 + 77 or 504	M1	
	their 504 ÷ 7 or 72	M1	their 504 must be from sum of 7 numbers
	72 and No	A1	SC1 438

Mark scheme and Additional Guidance continues on next page

10 (c) Cont'd	**Alternative method 2**		
	45 + 64 + 74 + 41 + 83 + 120 + 77 or 504	M1	
	75 × 7 or 525	M1	
	504 and 525 and No	A1	SC1 438
	Alternative method 3		
	differences below –30, –11, –1 and –34 or –76 (total of differences below) or differences above 8, 45 and 2 or 55 (total of differences above)	M1	condone one error for differences below
	their (–30) + their (–11) + their (–1) + their 8 + their 45 + their 2 or their –76 + their 55 or –21 or sum of the differences above (8, 45 and 2) and sum of the differences below (–30, –11, –1 and –34) or –76 and 55	M1dep	
	(–)21 and No or –76 and 55 and No	A1	
	Additional Guidance		
	eg 45 + 64 + 74 + 41 + 83 + 120 + 77 ÷ 7 unless recovered		M1M0A0

Q	Answer	Mark	Comments
11 (a)	Fully correct net of cube with sides 4 squares in length	B3	B2 six squares with sides 4 squares in length all attached but would not form a cube or B2 five squares with sides 4 squares in length that would form an open box B1 at least five squares with sides 4 squares in length but would not form an open box condone gaps between the squares for B1
	Additional Guidance		
	Ignore any tabs drawn		
	Internal sides of squares may be omitted		
	Mark intention		
	The five or six squares include the given one		

Q	Answer	Mark	Comments
11 (b)	**Alternative method 1**		
	5 × 3.15 or 15.75 or 4 × 10.75 or 43 or 2 × 15.45 or 30.9(0)	M1	
	5 × 3.15 + 4 × 10.75 + 2 × 15.45 or 15.75 + 43 + 30.9(0) or 89.65	M1dep	
	0.2(0) × (5 + 4 + 2) or 2.2(0)	M1	oe implied by 3.7(0) or 91.85
	their 89.65 + their 2.2(0) + 1.5(0)	M1	their 91.85 must include 5 small and/or 4 medium and/or 2 large boxes their 2.2(0) must be from 0.2(0) × [3, 11]
	93.35	A1	

Mark scheme and Additional Guidance continues on next page

11 (b) Cont'd	**Alternative method 2**		
	3.15 + 0.2(0) or 3.35 or 10.75 + 0.2(0) or 10.95 or 15.45 + 0.2(0) or 15.65	M1	
	5 × (3.15 + 0.2(0)) or 16.75 or 4 × (10.75 + 0.2(0)) or 43.8(0) or 2 × (15.45 + 0.2(0)) or 31.3(0)	M1dep	
	5 × (3.15 + 0.2(0)) + 4 × (10.75 + 0.2(0)) + 2 × (15.45 + 0.2(0)) or 16.75 + 43.8(0) + 31.3(0) or 91.85	M1dep	
	their 91.85 + 1.5(0)	M1	their 91.85 must include 5 small and/or 4 medium and/or 2 large boxes
	93.35	A1	

Additional Guidance continues on next page

	Additional Guidance	
11 (b) Cont'd	Equivalent methods may be seen eg $5 \times 3.15 + 1 = 9.15$ $4 \times 10.75 + 0.8 = 43.8$ $2 \times 15.45 + 0.4 = 31.3$ $9.15 + 43.8 + 31.3 = 84.25$ $84.25 + 1.5 = 85.75$ (loss of accuracy mark due to arithmetic error)	M1M1 M1M1A0
	Do not condone addition of multiple 1.5(0) eg1 $5 \times 3.15 = 15.75$ $4 \times 10.75 = 43$ $2 \times 15.45 = 30.9$ $15.75 + 43 + 30.9 = 89.65$ $(0.2 + 1.50) \times (5 + 4 + 2) = 18.70$ $89.65 + 18.70 = 108.35$ eg2 $15.75 + 20p + 20p + 20p + 20p + 20p + 1.50 = 18.25$ $43 + 20p + 20p + 20p + 20p + 1.50 = 45.30$ $30.90 + 20p + 20p + 1.50 = 32.80$ $18.25 + 45.30 + 32.80 = 96.35$	M1M1 M1M0 A0 M1M1 M1M0A0

Q	Answer	Mark	Comments
11 (c)	**Alternative method 1**		
	360 – 60 – 90 or 210	M1	may be seen on diagram
	16 200 ÷ 360 or 45	M1	oe
	their 210 × their 45 or 9450	M1dep	oe dep on M2
	9450 and No	A1	
	Alternative method 2		
	16 200 ÷ 4 or 4050 or 16 200 ÷ 6 or 2700	M1	oe
	16 200 ÷ 4 or 4050 and 16 200 ÷ 6 or 2700	M1	oe implied by 6750
	16 200 – their 4050 – their 2700 or 9450	M1dep	oe dep on M2
	9450 and No	A1	
	Alternative method 3		
	360 – 60 – 90 or 210	M1	oe may be seen on diagram
	their 210 ÷ 360 or 0.58(3…)	M1	oe
	their 210 ÷ 360 × 16 200 or 9450	M1dep	oe dep on M2
	9450 and No	A1	

Mark scheme and Additional Guidance continues on next page

11 (c) Cont'd	**Alternative method 4**		
	360 – 60 – 90 or 210	M1	may be seen on diagram
	10 000 ÷ 16 200 or 0.61(7…)	M1	oe
	their 0.61(7…) × 360 or 222.(2…)	M1dep	oe dep on previous M1
	210 and 222.(2…) and No	A1	
	Alternative method 5		
	360 – 60 – 90 or 210	M1	may be seen on diagram
	their 210 ÷ 360 or 0.58(3…)	M1dep	oe
	10 000 ÷ 16 200 or 0.61(7…)	M1	oe
	0.58(3…) and 0.61(7…) and No	A1	oe
	Alternative method 6		
	16 200 ÷ 12 or 1350 or 16 200 ÷ 4 or 4050	M1	oe
	16 200 ÷ 12 or 1350 **and** 16 200 ÷ 4 × 2 or 8100 or 16 200 ÷ 12 or 1350 **and** 16 200 ÷ 4 or 4050	M1	oe eg 16 200 ÷ 2
	their 8100 + their 1350 or their 4050 + their 4050 + their 1350 or 9450	M1dep	oe dep on M2
	9450 and No	A1	

Q	Answer	Mark	Comments
11 (d)	**Alternative method 1**		
	295 × 0.05 or 14.75	M1	oe 295 × 1.05 is M2
	295 + their 14.75 or 309.75	M1dep	
	their 309.75 – 269	M1	their 309.75 must be > 295
	40.75	A1	
	Alternative method 2		
	295 × 0.05 or 14.75	M1	oe
	295 – 269 or 26	M1	
	their 26 + their 14.75	M1dep	dep on M2
	40.75	A1	