AQA

GCSE

Mathematics

Paper 1 43651F

Mark scheme

43651F
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Version/Stage: 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 Assessment Writer.

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

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. e.g. 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 e.g. 3.14, 3.142, 3.1416
Q	Marks awarded for quality of written communication
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 candidate has used an incorrect method to obtain an answer, as a general principle, the benefit of doubt must be given to the candidate. In cases where there is no doubt that the answer has come from incorrect working then the candidate should be penalised.

Questions which ask candidates to show working

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

Questions which do not ask candidates to show working

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

Misread or miscopy

Candidates often copy values from a question incorrectly. If the examiner thinks that the candidate 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 candidate intended it to be a decimal point.

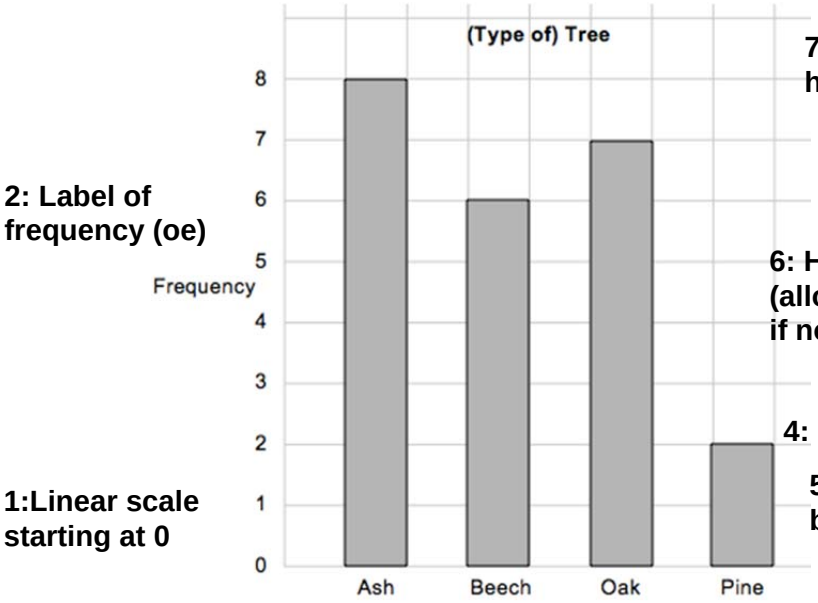
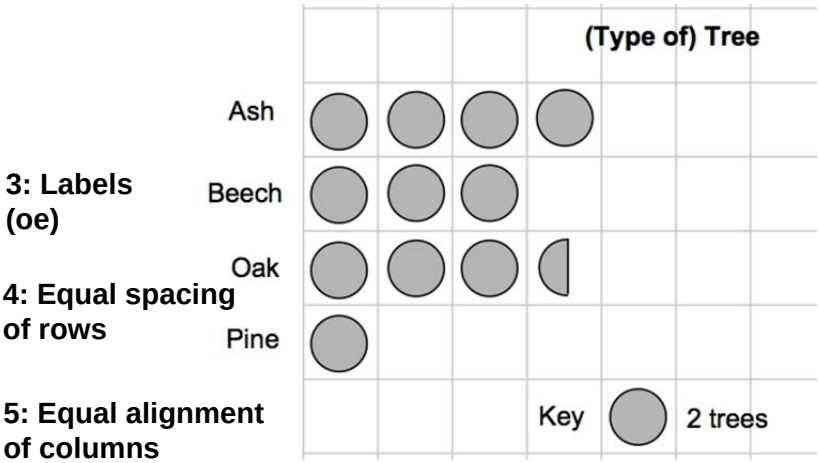
Paper 1 Foundation Tier

Q	Answer	Mark	Comments
1(a)	72	B1	
1(b)	36	B1	
1(c)	46	B1	
1(d)	$\frac{2}{5}$	B1	
2(a)	436	B1	
2(b)	168	B1	
2(c)	42	B1	Allow 042

Q	Answer	Mark	Comments
3	**Alternative method 1 Bar chart or vertical line graph (could be horizontal)**		
	Linear scale starting at 0 increasing in 1s or 2s Vertical axis labelled as 'frequency' (or clear reference such as f or freq) Bars/ lines labelled (allow A, B, O, P) Equal width for bars/ lines Equal spacing between bars/ lines All heights correct Title (accept this as a label of horizontal axis)	B3	B2 5 or 6 conditions met B1 3 or 4 conditions met
	Alternative method 2 Pictogram (vertical or horizontal)		
	Pictogram key Consistent symbols for at least 2 rows Labels for trees (allow A, B, O, P) Equal spacing of rows Equal alignment of columns Correct number of symbols eg 8, 6, 7, 2 if 1 symbol for 1 tree or 4, 3, 3.5, 1 if 1 symbol for 2 trees Title (accept this as a label of side or bottom 'axis')	B3	B2 5 or 6 conditions met B1 3 or 4 conditions met

Additional Guidance is on the next page

Q	Answer	Mark	Comments

	Additional Guidance	
3 cont	**Bar graph (or line graph) – could be horizontal**  **7: Title (could be label of horizontal axis)** **2: Label of frequency (oe)** **6: Heights correct (allow 8, 6, 7, 2 or 4, 3, 3.5, 1 if no axis scale)** **4: Equal widths for bars/lines** **5: Equal spacing between bars/ lines** **1:Linear scale starting at 0** **3: Bars/ lines labelled (oe) – allow in bars**	
	Pictogram – could be vertical  **7: Title (could be label of vertical axis)** **6: Correct number of symbols (allow 8, 6, 7, 2 or 4, 3, 3.5, 1 if no key)** **3: Labels (oe)** **2: Symbols consistent with key for at least 2 rows (If no key, symbols consistent with each other)** **4: Equal spacing of rows** **5: Equal alignment of columns** **1: Key**	
	Points only can score the marks for conditions 1, 2, 3, 6 and 7	B2 max
	Only check spacing between bars not before the first bar	
	All values not needed for axis scale eg 0 can be implied	
	Frequency may be Number or How many oe	
	Title must include the word Tree	

Q	Answer	Mark	Comments
4(a)	96 or 96.00(p)	B1	96.0 is B0
4(b)	21	B1	
4(c)	37 does not divide (exactly) by 6 or 36 is 6 people and 42 is 7 people or 37 is not in the 6 times table	B1	oe
	Additional Guidance		
	37 is odd / is prime		B1
	It is not (or it should be) even / multiples of 6 are even		B1
	(It is) not in 6 times table / not a multiple of 6 / must be a multiple of 6		B1
	It ends in a 7		B1
	6 × 6 = 36 and £1		B1
	37 ÷ 6 = 6 with remainder £1		B1
	6 × 6 = 36, 7 × 6 = 42		B1
	6, 12, 18, 24, 30, 36, 42		B1
	37 ÷ 6 = 6.1 (Allow 6.1 or 6.2 or 6r1)		B1
	No matter how many times you add 6 it doesn't end in 7		B1
	Only allow 37 doesn't go into 6 if a correct reason is **also** given eg 37 doesn't go into 6, 37 ÷ 6 = 6.1 37 doesn't go into 6, so it is not in the 6 times table		 B1 B1
	Do not allow if an incorrect calculation seen eg 37 ÷ 6 = 6.5 so 37 is not a multiple of 6		 B0
	£1 too many		B0
	6 × 6 = 36		B0
	37 doesn't go into 6		B0
	Not a whole number		B0
	6, 12, 18, 24, 30, 36 (no further)		B0

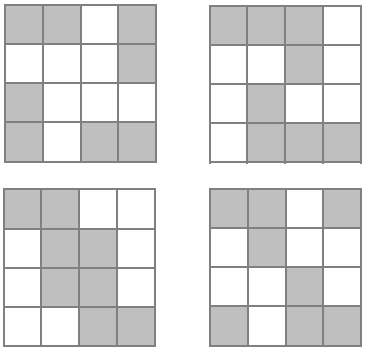
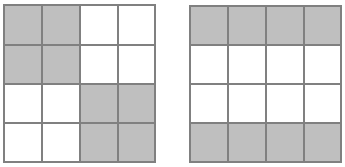
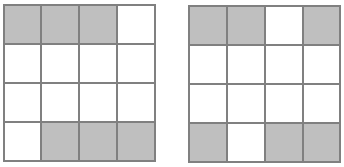
Q	Answer	Mark	Comments
4(d)	**Alternative method 1**		
	13 × 6 or 78 or 11 × 6 or 66 or 16 × 6 or 96 or their 96 from (a) or 13 + 11 + 16 or 40	M1	
	their 78 + their 66 + their 96 or their 40 × 6 or 240	M1dep	Must be three products
	their 240 × 0.9 or their 240 – their 240 × 0.1	M1dep	oe
	216	A1ft	ft their 96 from (a) if used
	Alternative method 2		
	13 + 11 + 16 or 40	M1	
	6 × 0.9 or 5.4(0) or 6 × 0.1 or 0.6(0)	M1	oe
	their 40 × their 5.4 or their 40 × (6 – their 0.6)	M1dep	oe dep on M2
	216	A1	

Alternative methods continued on the next page

Q	Answer	Mark	Comments
4(d) cont	**Alternative method 3**		
	13 + 11 + 16 or 40	M1	
	their 40 × 0.9 or 36 or their 40 × 0.1 or 4	M1dep	oe
	their 36 × 6 or (their 40 – their 4) × 6	M1dep	oe
	216	A1	
	Alternative method 4		
	13 × 6 or 78 or 11 × 6 or 66 or 16 × 6 or 96 or their 96 from (a)	M1	
	their 78 × 0.9 or 70.2(0) or their 66 × 0.9 or 59.4(0) or their 96 × 0.9 or 86.4(0) or their 78 × 0.1 or 7.8(0) or their 66 × 0.1 or 6.6(0) or their 96 × 0.1 or 9.6(0)	M1dep	oe
	their 70.2 + their 59.4 + their 86.4 or their 78 + their 66 + their 96 – their 7.8 – their 6.6 – their 9.6	M1dep	oe
	216	A1ft	ft their 96 from (a) if used

Alternative methods and Additional Guidance continued on the next page

Q	Answer	Mark	Comments
4(d) cont	**Alternative method 5**		
	13 × 0.9 or 11.7 or 11 × 0.9 or 9.9 or 16 × 0.9 or 14.4 or 13 × 0.1 or 1.3 or 11 × 0.1 or 1.1 or 16 × 0.1 or 1.6	M1	oe
	their 11.7 + their 9.9 + their 14.4 or 36 or their 1.3 + their 1.1 + their 1.6 or 4	M1dep	oe
	their 36 × 6 or (13 + 11 + 16 – their 4) × 6	M1dep	oe
	216	A1	
	Additional Guidance		
	Calculation for 10% seen as part of build-up to percentage other than 90 does not score the method mark for percentage		
	Build-up for percentages must be correct or show full method However allow rounding or truncation eg (for Alt 1) 78 + 66 + 96 = 235 10% = 23 Answer 212		M1 M1dep M1dep A0

Q	Answer	Mark	Comments
5(a)	Any two from (3, A), (3, B), (3, E) or (3, F)	B2	Accept coordinates transposed B1 one correct
	Additional Guidance		
	Accept (3A, 3B), (3E, 3F)		B2
5(b)	No **line** of **4** (whites) possible	B1	oe
	Additional Guidance		
	Accept row, path or reference to Connect 4 to imply line		
	Accept maximum of 3 to imply not 4		
5(c)	(4, E)	B1	Allow (E, 4)
6(a)	Any rotationally symmetrical pattern with 8 squares shaded and no line symmetry eg 	B2	B1 for any rotationally symmetrical pattern with 8 squares shaded and line symmetry eg  B1 for any rotationally symmetrical pattern with 6 – 10 squares shaded and no line symmetry eg 
	Additional Guidance		
	If answer pattern blank, mark practice pattern		

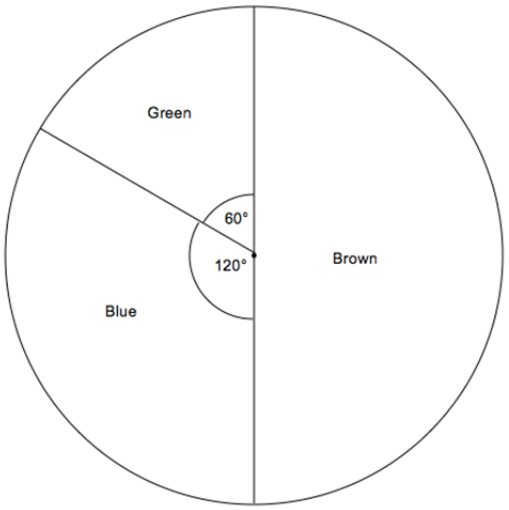
Q	Answer	Mark	Comments
6(b)	$\frac{1}{16}$ or $\frac{1}{8}$ seen or $\frac{1\frac{1}{2}}{4}$ or diagram divided into 16 squares or 16 seen	M1	oe
	$\frac{6}{16}$	A1	oe fraction eg $\frac{3}{8}$
	Additional Guidance		
	Ignore any incorrect cancelling (except $\frac{3}{7}$) once correct fraction seen		
	0.375 or $\frac{37.5}{100}$		M1 A0
7(a)	4 × 190 or 760 or 4 × 1.9(0) or 7.6(0) or 240 or 2.4(0)	M1	oe £240p or £2.40p
	(£)2.40	Q1	Strand (i)
	Additional Guidance		
	If building up or down must be correct or show full method		
7(b)	£2, 20p, 20p	B1ft	ft smallest number of coins for their (a) Allow coins or notes used for £5 or more
	Additional Guidance		
	Units needed		
	Correct coins in working lines followed by answer 3		B1
	(a) £8.10 (b) (£5) £2 £1 10p or £2 £2 £2 £2 10p		B1ft
8(a)	81	B1	
8(b)	3.7499	B1	

Q	Answer	Mark	Comments
9	**Alternative method 1**		
	(Red) 30 ÷ 3 or 10	M1	oe
	(Silver) 0.2 × 30 or 30 ÷ 5 or 6	M1	oe
	(Black) 30 – (their 10 + their 6) or 14	M1dep	dep on at least M1 scored
	$\frac{14}{30}$ or $\frac{7}{15}$	A1	oe
	Alternative method 2		
	(20% =) $\frac{1}{5}$	B1	oe fraction
	Correctly converts $\frac{1}{3}$ and their $\frac{1}{5}$ to fractions with a common denominator eg $\frac{5}{15}$ and $\frac{3}{15}$ or $\frac{8}{15}$	M1	
	1 – (their $\frac{5}{15}$ + their $\frac{3}{15}$)	M1dep	
	$\frac{7}{15}$	A1	oe
	Alternative method 3		
	($\frac{1}{3}$ =) 0.33(3) or 33.(3)%	B1	At least 2 sf
	0.2 + their 0.33 or 0.53(3) or 20% + their 33% or 53.(3)%	M1	
	1 – their 0.53 or 0.47 or 100% – their 53% or 47%	M1dep	At least 2 sf dep on B1M1
	$0.46\dot{6}$ or $46.\dot{6}$ %	A1	If exact value seen allow subsequent rounding or truncation

Additional Guidance is on the next page

Q	Answer	Mark	Comments

9 cont	**Additional Guidance**	
	red = 10 silver = 0.2 × (30 – 10) = 4 30 – (10 + 4) = 16 $\frac{16}{30}$	M1 M0 M1dep A0
	0.3 + 0.2 = 0.5 1 – 0.5 Answer 0.5	B0 M1 M0dep A0
	0.33 + 0.2 = 0.53 Answer 0.47	B1M1 M1dep A0
	Ignore any incorrect cancelling or change of form once correct answer seen	
	Ignore any probability words once correct answer seen	

10	Correct, labelled pie chart  	B3	Sizes of angles do not need to be labelled Mark intention for angles B2 Correct, unlabelled pie chart or labelled, 3-sector pie chart with one sector correct and Brown > Blue > Green B1 Pie chart (any number of sectors) with one correct sector (labelled or unlabelled) or 60°, 120° and 180° seen or $\frac{1}{6}$, $\frac{1}{3}$ and $\frac{1}{2}$ oe seen
	Additional Guidance		
	Correct angles seen in table		B1
	Labels must be words or eg Br, Bl, Gr not just numbers or angles		
	Allow sectors to be split if the split sectors remain adjacent		

Q	Answer	Mark	Comments

11(a)	21	B1	
	Additional Guidance		
	Embedded answer only of $21 \div 3 = 7$ or $\frac{21}{3} = 7$		B0

11(b)	23	B1	
	Additional Guidance		
	Embedded answer only of $23 - 11 = 12$		B0

11(c)	$\pm 2w$ or ± 18 or $5w - 3w = 15 + 3$	M1	Terms in w or constant terms collected
	$2w = 18$ or $-2w = -18$ or $\frac{18}{2}$	A1	
	9	A1ft	ft on $2w = a$ where $a \neq 3$ or 15 or $bw = 18$ where $b \neq 5$ or 3
	Additional Guidance		
	$2w = 12$ 6		M1 A0 A1ft
	$8w = 18$ 2.25 or $\frac{18}{8}$ oe		M1 A0 A1ft
	$3w = 12$ 4		M0
	$3w = 18$ 6		M1 A0 A0ft
	Embedded answer of 9		M1 A1 A0
	If only decimal answer given must be accurate to at least 2 dp		

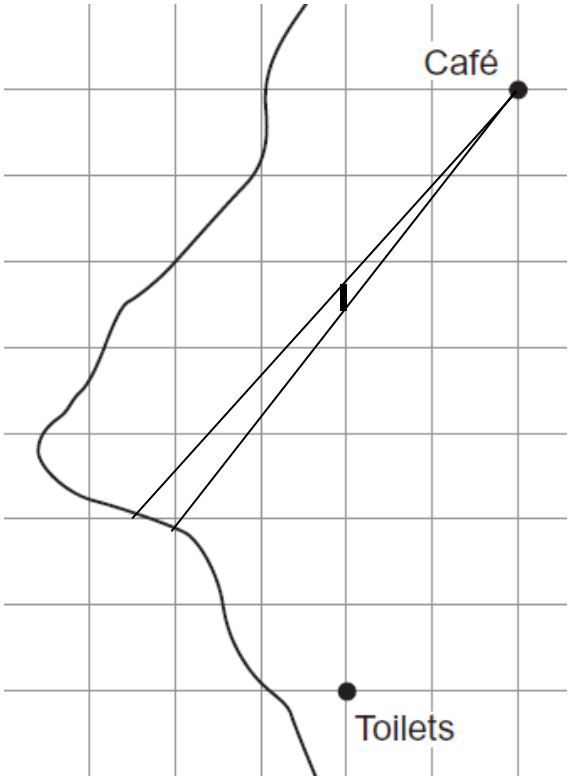
Q	Answer	Mark	Comments
12	2, 3, 4, 6, 7, 8	B3	B2 Six numbers, median 5, total 30 Allow **one** of decimals, numbers < 2 or repeated numbers eg 2, 2, 2, 8, 8, 8 or 2, 2.5, 4, 6, 7.5, 8 or 1, 2, 4, 6, 7, 10 B1 Any six numbers with median 5 Allow cards to be in any order
	Additional Guidance		
	Combinations for B2 that have repeats 2, 2, 2, 8, 8, 8 2, 2, 3, 7, 7, 9 2, 2, 3, 7, 8, 8 2, 2, 4, 6, 6, 10 2, 2, 4, 6, 7, 9 2, 2, 4, 6, 8, 8 2, 2, 5, 5, 5, 11 2, 2, 5, 5, 6, 10 2, 2, 5, 5, 7, 9 2, 2, 5, 5, 8, 8 2, 3, 3, 7, 7, 8 2, 3, 4, 6, 6, 9 2, 3, 5, 5, 5, 10 2, 3, 5, 5, 6, 9 2, 3, 5, 5, 7, 8 2, 4, 4, 6, 6, 8 2, 4, 4, 6, 7, 7 2, 4, 5, 5, 5, 9 2, 4, 5, 5, 6, 8 2, 4, 5, 5, 7, 7 2, 5, 5, 5, 5, 8 2, 5, 5, 5, 6, 7		B2
	If answer line blank, mark working and apply usual rules for choice		

Q	Answer	Mark	Comments
13	1 – (0.2 + 0.3 + 0.15) or 0.65	M1	oe eg 65%
	0.35	A1	oe eg 35%
	Additional Guidance		
	0.2 + 0.3 + 0.15 = 0.2 0.8	Answer follows through	M1 A0
	0.2 + 0.3 + 0.15 = 0.55 1 – 0.55 = 0.25	Method even though answer wrong	M1 A0
	0.2 + 0.3 + 0.15 = 0.55 0.35	No method seen and answer does not follow through	M0 A0
	0.65 0.45		M1 A0
	Answer only of 0.65		M1 A0
	0.2 0.8	No addition seen	M0
	Embedded answer 0.2 + 0.3 + 0.15 + 0.35 = 1		M1 A0
	0.2 + 0.3 + 0.15 + 0.8 = 1 Answer 0.8		M1 A0

Q	Answer	Mark	Comments
14	Side of square = 5 or 5 × 5 = 25 oe	B1	May be on diagram
	400 ÷ 25	M1	
	16	A1	May be on diagram 16 × 25 = 400 oe is M1 A1
	Yes and 5 and their 16	Q1ft	Strand (iii) Conclusion must be based on length not volume ft their 16 if B1 M1 awarded and correct conclusion
	Additional Guidance		
	Ignore any volume calculations		
	Square = 5 cm 25 × 21 = 400 No		B1 M1 A0 Q1ft
15(a)	Café	B1	
15(b)	[336, 340]	B2	B1 for [334, 342] but not [336, 340] which scores B2 or for [156, 160]
	Additional Guidance		
	340		B2
	335		B1
	342		B1
	157		B1
	Ignore extra compass directions eg 338 NW		B2

Q	Answer	Mark	Comments

15(c)	Point within tolerance (on bold line)	B2	B1 Point [4, 5] squares on the line North of the Toilets or Point between 'rays'



Additional Guidance	
Mark intention (point should be [0.2, 0.6] of a square down from top grid line)	
Correct bearing drawn that stops at bold line	B2
Correct bearing drawn that stops inside park	B1

Q	Answer	Mark	Comments
16	**Alternative method 1**		
	BCD = 105	B1	
	DCE = 180 – their 105 or 75	M1	Calculation **must** be shown or correct angle marked on diagram
	CDE = 180 – (their 75 + 30) or 75	M1dep	Calculation **must** be shown or correct angle marked on diagram
	DCE = 75 and *CDE* = 75 and 'two angles equal'	Q1	Strand (ii) Must score B1M2 and have no incorrect angles or calculations seen
	Additional Guidance		
	C = 105 *C* = 180 – 105 = 65 *D* = 180 – (65 + 30) = 85		B1 M1 M1dep Q0
	BCD = 75 *DCE* = 180 – 75 = 105 *CDE* = 180 – (105 + 30) = 45		B0 M1 M1dep Q0
	BCD = 105 *DCE* = 65 *CDE* = 85 (no method shown)		B1 M0 M0dep Q0

Alternative methods continued on the next page

Q	Answer	Mark	Comments
16 cont	**Alternative method 2**		
	ABC = 180 – 105 or 75 or *ADC* = 180 – 105 or 75	M1	Calculation **must** be shown or correct angle marked on diagram
	DCE = their 75	M1dep	their 75 must be the same as their *ABC* or their *ADC*
	CDE = 180 – (their 75 + 30) or 75	M1dep	Calculation **must** be shown or correct angle marked on diagram
	DCE = 75 and *CDE* = 75 and 'two angles equal'	Q1	Strand (ii) Must score M3 and have no incorrect angles or calculations seen
	Additional Guidance		
	B = 180 – 105 = 75 *C* = 105 *D* = 180 – (105 + 30) = 45		M1 M0dep M0dep Q0
	ABC (or *ADC*) = 180 – 105 = 65 *DCE* = 65 *CDE* = 85 (no method shown)		M1 M1dep M0dep Q0
	ABC (or *ADC*) = 180 – 105 = 75 *DCE* = 75 *CDE* = 180 – (75 + 30) = 65		M1 M1dep M1dep Q0

Alternative methods continued on the next page

Q	Answer	Mark	Comments
16 cont	**Alternative method 3**		
	BCD = 105	B1	
	CDE = their 105 – 30 or 75	M1	Calculation **must** be shown or correct angle marked on diagram
	DCE = 180 – (their 75 + 30) or 75	M1dep	Calculation **must** be shown or correct angle marked on diagram
	DCE = 75 and *CDE* = 75 and 'two angles equal'	Q1	Strand (ii) Must score B1M2 and have no incorrect angles or calculations seen
	Additional Guidance		
	C = 105 *D* = 105 – 30 = 65 *C* = 180 – (65 + 30) = 85		B1 M1 M1dep Q0
	BCD = 75 *CDE* = 75 – 30 = 45 *DCE* = 180 – (45 + 30) = 105		B0 M1 M1dep Q0
	BCD = 105 *CDE* = 65 *DCE* = 85 (no method shown)		B1 M0 M0dep Q0

Alternative methods continued on the next page

Q	Answer	Mark	Comments
16 cont	**Alternative method 4**		
	DCE or *CDE* = (180 – 30) ÷ 2 or 75	M1	Calculation **must** be shown or one correct angle marked on diagram
	CDE **and** *DCE* = their 75	M1dep	
	DCB = 180 – their 75 or 105 or *ABC* = their 75 or *ADC* = their 75	M1dep	Calculation **must** be shown or correct angle marked on diagram
	DCE = 75 and *CDE* = 75 and *DCB* = 105 and 'opposite angles of parallelogram equal' or *DCE* = 75 and *CDE* = 75 and *ABC* or *ADC* = 75 and 'allied or (co)interior angles of parallelogram'	Q1	Strand (ii) Must score M3 and have no incorrect angles or calculations seen
	Additional Guidance		
	(180 – 30) ÷ 2 = 65 *C* = 65 and *D* = 65 *C* = 115 (no method shown)		M1 M1dep M0dep Q0
	(180 – 30) ÷ 2 = 75 *DCE* = 75 and *CDE* = 75 *DCB* = 180 – 75 = 105		M1 M1dep M1dep Q0

Q	Answer	Mark	Comments
17	$2 \times (30 + 70)$ or 200	M1	
	their $200 \div 4$ or 50	M1dep	$100 \div 2$ is M2
	their 50 $\times$ their 50 or 2500 or 30×70 or 2100	M1	their 50 must follow M1 M1dep
	400	A1	
	Additional Guidance		
	Perimeter = 100 Side of square = 25 2100 – 625 1475		M0 M0dep M1 A0
	Side of square = $\sqrt{100}$ = 10 2100 – 100 2000		M0 M0dep M1 A0
	$30 \times 70 = 2400$ $50 \times 50 = 2500$ 2500 – 2400 = 100		M1 M1dep M1 A0
	Side of square = 25 $30 \times 70 = 2400$ Answer 625		M0 M0dep M1 A0
	$30 \times 70 = 2100$ $2100 \times 2 = 4200$		3rd M0

Q	Answer	Mark	Comments
18	Any correct product, or division with answer of 210 that involves a prime number eg 2×105, 5×42, $210 \div 3 = 70$, $21 \times 2 \times 5$ or 2, 3, 5, 7	M1	
	$2 \times 3 \times 5 \times 7$	A1	
	Additional Guidance		
	Product may be implied for M1 by a prime factor tree, a prime factor ladder or values written as pairs eg (2, 105)		M1
	$1 \times 2 \times 3 \times 5 \times 7$		M1 A0
19	$6n + 3$ or $3(2n + 1)$	B2	oe B1 for $6n$ Accept $6 \times n$ or $n \times 6$ but not $n6$ B1 for $n6 + 3$ Accept any letter
20	360 ÷ 10 or 36 or 180 × (10 – 2) or 10 × 180 – 360 or 1440	M1	oe
	144	A1	
	Additional Guidance		
	Answer only of 144		M1 A1