

INTERNATIONAL GCSE MATHEMATICS

9260/1C

Core Tier Paper 1C

Mark scheme

November 2024

Version: 1.0 Final



2 4 B Y 9 2 6 0 / 1 C / M S

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Key to mark types and abbreviations

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.

Q	Answer	Mark	Comments
1	4 or four	B1	

Q	Answer	Mark	Comments
2(a)	30	B1	

Q	Answer	Mark	Comments
2(b)	24	B1	

Q	Answer	Mark	Comments
3	radius	B1	
	Additional Guidance		
	Ignore spelling if intention is clear		

Q	Answer	Mark	Comments
4	$\times 3$ and -5 or $-\frac{5}{3}$ and $\times 3$	B1	oe decimals or fractions must be in correct order operator must be before number condone use of words
	Additional Guidance		
	$+ 2x$ and -5 (oe using the variable)		B0

Q	Answer	Mark	Comments
5(a)	(3, 2.5)	B2	oe B1 one correct coordinate SC1 (2.5, 3) oe
	Additional Guidance		
	Accept a comma used as a decimal point		B2

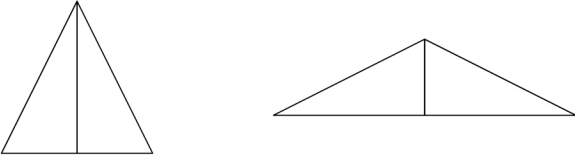
Q	Answer	Mark	Comments
5(b)	(4, 2)	B1	condone (6, 1)

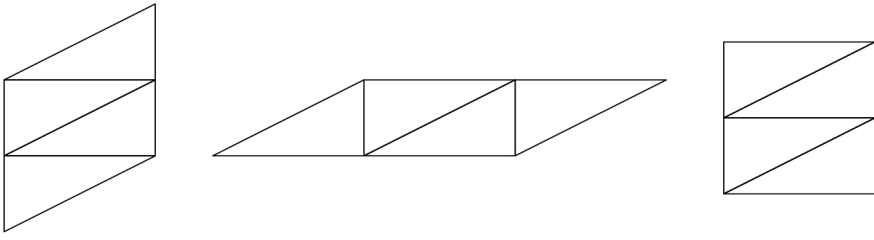
Q	Answer	Mark	Comments
5(c)	Line from (0, 6) to (2, 5)	B2	B1 line parallel to JK from any point which extends across at least two horizontal squares or line that is a third of the length of JK
	Additional Guidance		
	Parallel line that extends beyond the grid		B1
	Line drawn that is completely off the grid		B0

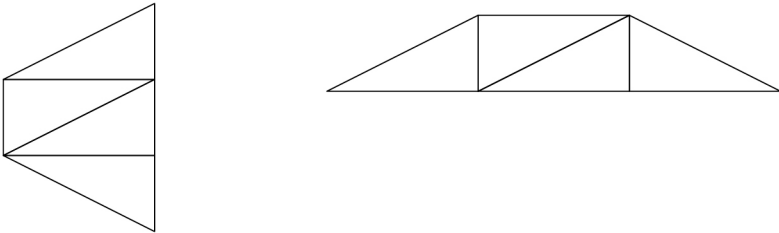
Q	Answer	Mark	Comments
6	41	B2	B1 64 or 23

Q	Answer	Mark	Comments
7	Alternative method 1		
	$37 + 6 + 23 + 34 + 8 + 11$ or 119 or $27 + 10 + 28 + 16$ or 81	M1	
	their 119 – their 81 + 30 or 68	M1dep	
	34 with at least M1 scored	A1	
	Alternative method 2		
	$37 + 6 + 23 + 34 + 8 + 11$ or 119 or $27 + 10 + 28 + 16$ or 81	M1	
	$(37 + 6 + 23 + 34 + 8 + 11 + 27 + 10 + 28 + 16 - 30) \div 2$ or 85 or $(37 + 6 + 23 + 34 + 8 + 11 + 27 + 10 + 28 + 16 + 30) \div 2$ or 115	M1	
	34 with at least M1 scored	A1	
	Alternative method 3		
	Correctly summing group A without one number and correctly summing group B with that number	M1	eg $37 + 6 + 23 + 34 + 8$ and $27 + 10 + 28 + 16 + 11$ or 108 and 92 or 111 and 89 or 85 and 115 or 96 and 104 or 113 and 8 or 82 and 118
	Correctly summing group A without a different number and correctly summing group B with that number	M1dep	
	34 with at least M1 scored	A1	

Q	Answer	Mark	Comments
8	Two correct criticisms from Letters are used instead of words Gaps are different Bar heights do not add up to 25 with no incorrect criticisms	B2	B1 two correct criticisms with one or more incorrect criticisms or one correct criticism with at most two incorrect criticisms
	Additional Guidance		
	Both criticisms may be seen in one sentence eg The bars don't add up to 25 and are spread unevenly		B2
	There's no key		B1
	Any values used must be correct eg There are 28 cars eg $14 + 4 + 10 = 26$ not 25		B1 B0
	Number of cars should go up to 25 not 14		B0
	Number of cars is wrong (doesn't mention 25 or 28 or 3)		B0
	Labels are wrong (insufficient – needs to specify which labels)		B0
	The title is incorrect		B0
	The bars should be 1cm apart		B0

Q	Answer	Mark	Comments
9(a)	Correct shape drawn in any orientation	B1	
	Additional Guidance		
	eg 		B1
	Mark intention		
	Accept outline of triangle without internal lines		

Q	Answer	Mark	Comments
9(b)	Correct shape drawn in any orientation	B1	SC1 parallelogram using the same incorrectly sized, scalene, right-angled triangles as part (a)
	Additional Guidance		
	eg 		
	Mark intention		
	Accept outline of parallelogram without internal lines unless triangles are non-contiguous		

Q	Answer	Mark	Comments
9(c)	Correct shape drawn in any orientation	B1	SC1 trapezium using the same incorrectly sized, scalene, right-angled triangles as part (a) or (b)
	Additional Guidance		
	eg 		
	Mark intention		
	Accept outline of trapezium without internal lines		

Q	Answer	Mark	Comments
10(a)	No and correct reason	B1	eg No and she has done B from A or No and the North line should go from B or No and it should be 40°
	Additional Guidance		
	Allow a tolerance of 2° on 40°		
	No and a correct method/drawing shown in either box		B1
	No, the bearing should be acute		B1
	No, started from A (and went to B)		B1
	No, it's from the wrong place		B1
	Any values used must be correct eg bearing would be 140		B0

Q	Answer	Mark	Comments
10(b)	Correct reason	B1	eg South West is 225°
	Additional Guidance		
	Reasoning may be seen on a diagram		
	SW lies between 180° and 270° (135° isn't)		B1
	SW must be greater than 180°		B1
	D is South East of C		B1
	Do not accept incorrect statements eg South West is 270°		B0

Q	Answer	Mark	Comments
10(c)	Line drawn due North from <i>E</i> reaching at least to the coastline	B1	mark intention on 'North' mark intention on 'line' accept a cross or mark on coast roughly North of <i>E</i> implied by [100, 108] or [5, 5.4]
	Correct measurement of their line from <i>E</i> to the coastline	M1	± 2 mm
	Correct evaluation of length of their line from <i>E</i> to the coastline $\times 20$	A1ft	ft their line [100, 108] scores B1M1A1 SC2 correct evaluation of the length of their line which is not to the coastline SC1 correct measurement of the length of their line which is not to the coastline

Q	Answer	Mark	Comments
11(a)	-6	B1	
	Additional Guidance		
	Embedded answer		B0

Q	Answer	Mark	Comments
11(b)	45	B1	
	Additional Guidance		
	45 seen but 9 given as answer		B0
	Answer $\frac{45}{5}$		B0

Q	Answer	Mark	Comments
11(c)	$\frac{7k}{8}$ or $0.875k$	B2	B1 partial simplification eg $\frac{7k^2}{8k}$ or $\frac{42k}{48}$ or $\frac{21k^2}{24k}$ or $\frac{14k}{16}$ or $\frac{0.875k^2}{k}$
	Additional Guidance		
	Condone k^1 for B1 but not for B2		
	$\frac{7}{8}k$		B2
	$\frac{7}{8} \times k$		B1

Q	Answer	Mark	Comments
12(a)	$\frac{1}{5}$ or 0.2(0) or 20%	B1	oe fraction, decimal or percentage
	Additional Guidance		
	Ignore any description of probability eg $\frac{1}{5}$ unlikely		B1
	1 : 5 on answer line		B0
	1 out of 5 without $\frac{1}{5}$ in working		B0

Q	Answer	Mark	Comments
12(b)	$\frac{2}{5}$ or 0.4(0) or 40%	B1	oe fraction, decimal or percentage
	Additional Guidance		
	Ignore any description of probability eg $\frac{2}{5}$ unlikely		B1
	2 : 5 on answer line		B0
	2 out of 5 without $\frac{2}{5}$ in working		B0

Q	Answer	Mark	Comments
12(c)	$\left(1 - \text{their } \frac{1}{5} - \text{their } \frac{2}{5}\right) \times 35$ or $\frac{2}{5} \times 35$ or $35 \div 5 \times 2$	M1	oe ft their $\frac{1}{5}$ from (a) and their $\frac{2}{5}$ from (b) where their (a) + their (b) < 1
	14	A1ft	correct or ft their $\frac{1}{5}$ from (a) and their $\frac{2}{5}$ from (b) where their (a) + their (b) < 1
	Additional Guidance		
	14 out of 35 on answer line		M1A1

Q	Answer	Mark	Comments
13(a)	Alternative method 1: by calculation		
	$360 - 58 - 90$ or 212	M1	
	their $212 \div 4 (\times 3)$ or 53 or 159	M1dep	correct line drawn implies M1M1
	Ruled correct line drawn within 2° and sections labelled correctly	A1	L in the section with $[51^\circ, 55^\circ]$ M in the section with $[157^\circ, 161^\circ]$
	Alternative method 2: by measurement		
	[210, 214]	M1	
	their $[210, 214] \div 4 (\times 3)$ or $[51, 55]$ or $[157, 161]$	M1dep	
	Ruled correct line drawn within 2° and sections labelled correctly	A1	L in the section with $[51^\circ, 55^\circ]$ M in the section with $[157^\circ, 161^\circ]$
	Additional Guidance		
	If the angle has been found by measurement, allow a further 2° tolerance on the drawing eg measures 210° , $210 \div 4 \times 3$ to 157.5° and draws line at 156°		M1M1A1
	Correct sections with no labels		M1M1A0
	Angles may be on the diagram		
	Mark diagram first, if line out of tolerance, check working for method marks		

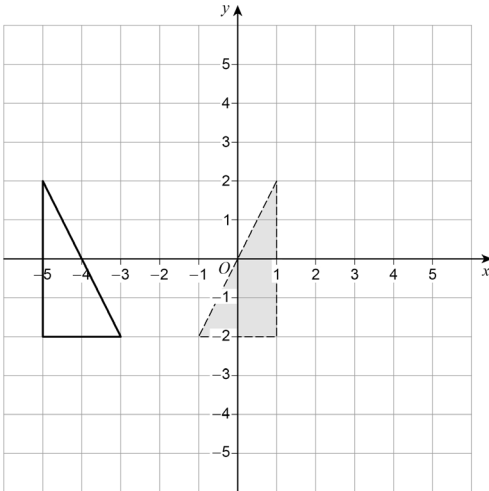
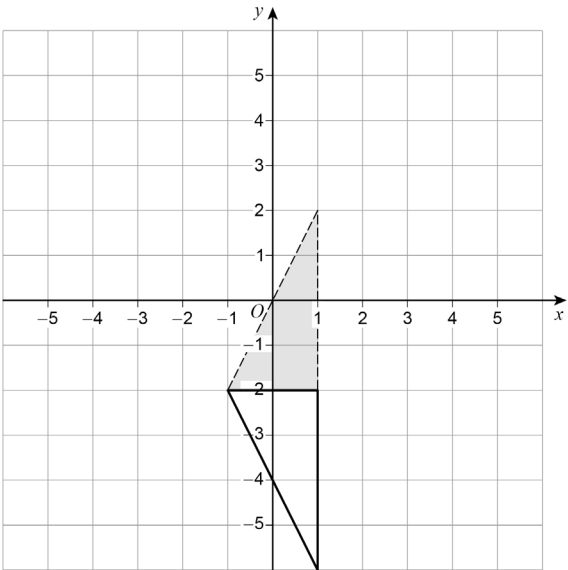
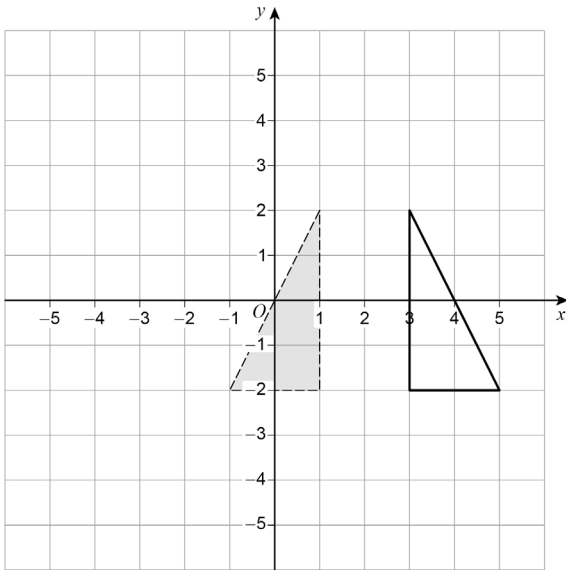
Q	Answer	Mark	Comments
13(b)	$27\,000 \div 360 (\times 58)$ or $75 (\times 58)$ or $27\,000 \times 58 (\div 360)$ or $1\,566\,000 (\div 360)$	M1	oe
	4350	A1	
	Additional Guidance		
	$27\,000 - 4350 = 22\,650$		M1A0

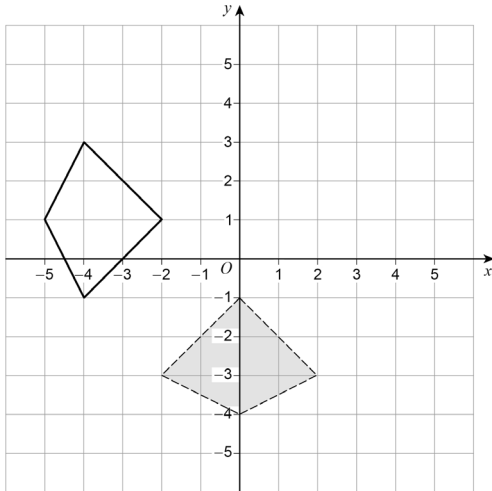
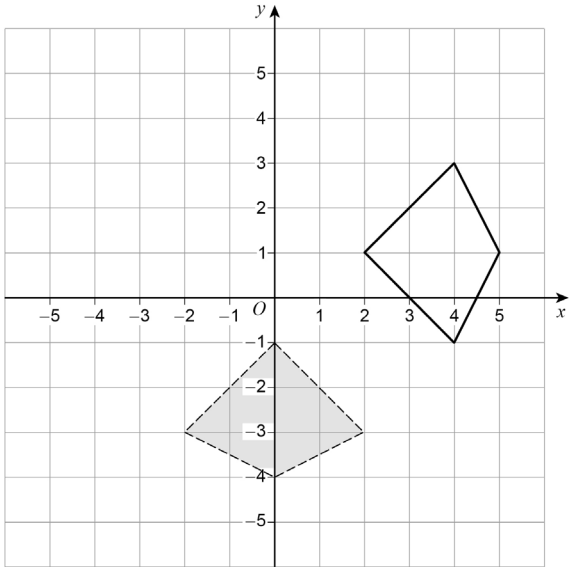
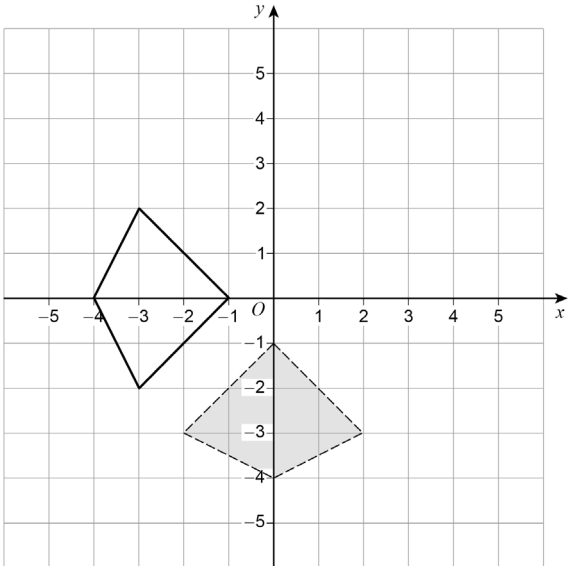
Q	Answer	Mark	Comments
14(a)	Alternative method 1		
	$\frac{5}{2}$ and $\frac{2}{2}$ or $\frac{2.5}{2.5+1}$ or $\frac{2.5}{3.5}$ or $5 : 2$ or any correct ratio using integers	M1	oe fractions with common denominators eg $10 : 4$
	$\frac{5}{7}$	A1	oe fraction eg $\frac{6000}{8400}$
	Alternative method 2		
	$8400 \div (2.5 + 1)$ or 2400 or $8400 \div (2.5 + 1) \times 2.5$ or 6000	M1	
	$\frac{5}{7}$	A1	oe fraction eg $\frac{6000}{8400}$
	Additional Guidance		
	Ignore attempt at simplification after a correct fraction seen		

Q	Answer	Mark	Comments
14(b)	0.4 or $\frac{2}{5}$	B1	oe fraction or decimal

Q	Answer	Mark	Comments
15(a)	6498.94509	B1	
	Additional Guidance		
	6'498.94509 or 6,498.94509		B1
	6.498.94509		B0
	Allow correct rounding or truncation once full value seen		

Q	Answer	Mark	Comments
15(b)	10 or 100 or 60	M1	
	$10^2 \times 60$ or 100×60 or $10^2 \times 62$ or 100×62	M1dep	
	$100 \times 60 = 6000$ or $100 \times 62 = 6200$	A1	
	Additional Guidance		
	6000 or 6200 with no working		M0M0A0
	Ignore any written decision		

Q	Answer	Mark	Comments
16(a)		B2	B1 for line $x = -2$ drawn or all vertices correctly plotted but not joined or reflection in $y = -2$
	 or reflection in $x = a$ eg		
			
Additional Guidance			
Mark intention			

Q	Answer	Mark	Comments
16(b)		B2	B1 all four vertices correctly plotted but not joined or rotation 90° anticlockwise about (0, 1)
			
			or any rotation of 90° clockwise eg 
Additional Guidance			
Mark intention			

Q	Answer	Mark	Comments
17	$11 \times 6 (\times 2)$ or $66 (\times 2)$ or 132 or $11 \times 4.5 (\times 2)$ or $49.5 (\times 2)$ or 99 or $6 \times 4.5 (\times 2)$ or $27 (\times 2)$ or 54	M1	implied by 285
	$11 \times 6 \times 2$ or 132 and $11 \times 4.5 \times 2 + 6 \times 4.5 \times 2$ or $99 + 54$ or 153 or 11×6 or 66 and $11 \times 4.5 + 6 \times 4.5$ or $49.5 + 27$ or 76.5	M1dep	accept Blue = 132 and (total =) 285 or Green = 153 and (total =) 285
	132 and 153 and Green or 66 and 76.5 and Green or 132 and 285 and Green or 153 and 285 and Green	A1	oe condone incorrect units

Q	Answer	Mark	Comments
18	Alternative method 1		
	Any correct equation in t and c	M1	any letters eg $t + 3c = 8.8(0)$ or $6t + c = 13.7(0)$
	Two equations with equal coefficients for one unknown	M1dep	eg $6t + c = 13.7(0)$ and $6t + 18c = 52.8(0)$ or $18t + 3c = 41.1(0)$ and $t + 3c = 8.8(0)$
	Correct subtraction to eliminate one unknown for their correct equations	M1dep	eg $18c - c = \text{their } 52.8(0) - 13.7(0)$ or $17c = 39.1(0)$ or $c = 2.3(0)$ or $18t - t = \text{their } 41.1(0) - 8.8(0)$ or $17t = 32.3(0)$ or $t = 1.9(0)$
	1 Tea = \$1.9(0) 1 Coffee = \$2.3(0)	A1	

Question 18 continues on the next page

Q	Answer	Mark	Comments
18 cont	Alternative method 2		
	Any correct equation in t and c	M1	any letters eg $t + 3c = 8.8(0)$ or $6t + c = 13.7(0)$
	Rearranges one equation to express one variable in terms of the other	M1	eg $c = \frac{8.8(0) - t}{3}$ or $c = 13.7(0) - 6t$ or $t = 8.8(0) - 3c$ or $t = \frac{13.7(0) - c}{6}$
	Substitutes the expression into a different equation to eliminate one unknown	M1dep	eg $3(13.7(0) - 6t) + t = 8.8(0)$ or $\frac{8.8(0) - t}{3} + 6t = 13.7(0)$ or $t = 1.9(0)$ or $3c + \frac{13.7(0) - c}{6} = 8.8(0)$ or $c + 6(8.8(0) - 3c) = 13.7(0)$ or $c = 2.3(0)$
	1 Tea = \$1.9(0) 1 Coffee = \$2.3(0)	A1	

Q	Answer	Mark	Comments
19	$4x + 28 < 36$ or $4x < 8$ or $x + 7 < 9$ or 2	M1	
	$x < 2$	A1	

Q	Answer	Mark	Comments
20	$2 \times 5 \times 7$ and $3 \times 5 \times 7$ or (1,) 2, 5, 7, 10, 14, 35 (,70) and (1,) 3, 5, 7, 15, 21, 35 (,105) or chooses HCF = 35	M1	may be seen in factor trees
	At least two from 10, 20, 30 or 2, 4, 6, 8, 10 and 5, 10 or chooses LCM = 10	M1	
	Identifies or uses (HCF =) 35 and (LCM =) 10	A1	implied by correct answer
	3.5	A1	oe

Q	Answer	Mark	Comments
21	$12 \times 2 \times 120 \times 0.025$ or 72 or $12 \times 2 \times 120 \times 1.025$ or 2952	M1	oe
	2800×1.03^2 or 2970(.52)	M2	oe implied by 170.52 M1 2800×1.03 oe or 2884 or 2800×0.03 oe or 84
	18.52	A1	SC3 98.52
	Additional Guidance		
	SC3 for difference in the interest		

Q	Answer	Mark	Comments
22	$4x + 10 = 7x - 35$ or $4x + 10 = 5(x - 1)$ or $7x - 35 = 5(x - 1)$	M1	oe sets up a correct equation
	$10 + 35 = 7x - 4x$ or $45 = 3x$ or $10 + 5 = 5x - 4x$ or $7x - 5x = -5 + 35$ or $2x = 30$	M1dep	oe collects terms for their equation
	(x =) 15	A1	implied by (length of one side =) 70 or 210 or 2.1
	$(7 \times \text{their } 15 - 35) \times 3$ or $(4 \times \text{their } 15 + 10) \times 3$ or $[5 \times (\text{their } 15 - 1)] \times 3$ or $7 \times \text{their } 15 - 35 + 4 \times \text{their } 15 + 10 + 5 \times (\text{their } 15 - 1)$ or $16 \times \text{their } 15 - 30$ or 210 or 2.1 or $7x - 35 + 4x + 10 + 5(x - 1) = 2$ or (x =) 14.375	M1	oe
	210 and Yes or 2.1 and Yes or 14.375 and 15 and Yes	A1ft	ft correct perimeter and decision for their 15
	Additional Guidance		
	Correct answer from trial and improvement		M1M1A1M1A1

Q	Answer	Mark	Comments
23	82×17 or 1394 or $x \div 17 = 82$	M1	oe any letter
	$\frac{82 \times 17 + 91}{17 + 1}$ or $\frac{1485}{18}$	M1dep	oe
	82.5	A1	

Q	Answer	Mark	Comments
24	Arc, centre A, radius 5 cm	M1	mark intention arc must be at least a quarter circle
	Two pairs of intersecting arcs of equal radius from B and C or straight line through the midpoint of BC with a gradient of $\frac{1}{3}$	M1	may be one arc from each point with two intersections must cross at least three horizontal squares
	Fully correct diagram with correct region identified	A1	

Q	Answer	Mark	Comments
25	$3ax - 8a$ or $3ax = 33x$ or $3a = 33$ or $-8a = 2b$	M1	oe
	$(a =) 11$	A1	
	$(b =) -44$	A1ft	correct or ft $\frac{-8 \times \text{their } a}{2}$
	Additional Guidance		
	$a = 11x$		M0