



2008 Mathematics

Intermediate 1 – Units 1, 2 & Applications Paper 2

Finalised Marking Instructions

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Mathematics Intermediate 1: Paper 2, Units 1, 2 and Applications

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
1 (a)	Ans: diagram <ul style="list-style-type: none"> •¹ communicate: plot point •² communicate: plot points 	<ul style="list-style-type: none"> •¹ plot A or B or C •² plot other two points <p style="text-align: right;">2 marks</p>
(b)	Ans: D(3,2) plotted <ul style="list-style-type: none"> •¹ strategy: plot 4th vertex of square 	<ul style="list-style-type: none"> •¹ plot(3,2) <p style="text-align: right;">1 mark</p>
<p>NOTES:</p> <ol style="list-style-type: none"> 1. Accept (3,2) if D not plotted 2. If D(3,2) is plotted but wrong coordinates are stated then award 1/1 3. Where (y,x) is consistently plotted <ul style="list-style-type: none"> - award 1/2 for (a) - award 1/1 for (b) for plotting 4th vertex of square 		

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •																		
2 (a)	Ans: £841 • ¹ interpret: find basic premium	• ¹ 841 <p style="text-align: right;">1 mark</p>																		
NOTES: 1. Working subsequent to “correct” answer e.g. $841 \div 12 = 70.08$ award 0/1																				
2 (b)	Ans: £277.53 • ¹ interpret/strategy/process: find discount • ² strategy/process: find net premium	• ¹ $\frac{67}{100} \times 841 = 563.47$ • ² 277.53 <p style="text-align: right;">2 marks</p>																		
NOTES: 1. Some common answers <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>with working</u></th> <th style="text-align: center;"><u>without working</u></th> </tr> </thead> <tbody> <tr> <td>(a) 277.53</td> <td style="text-align: center;">2/2</td> <td style="text-align: center;">2/2</td> </tr> <tr> <td>(b) 563.47</td> <td style="text-align: center;">1/2</td> <td style="text-align: center;">1/2</td> </tr> <tr> <td>(c) 277.50 (841 – 563.50)</td> <td style="text-align: center;">1/2</td> <td style="text-align: center;">1/2</td> </tr> <tr> <td>(d) 278 (841 – 563)</td> <td style="text-align: center;">1/2</td> <td style="text-align: center;">1/2</td> </tr> <tr> <td>(e) 563.50, 563</td> <td style="text-align: center;">see note 2</td> <td style="text-align: center;">0/2</td> </tr> </tbody> </table> 2. (i) $\frac{67}{100} \times 841 = 563.47 = 563.50$ or 563 award 1 st mark (ii) $\frac{67}{100} \times 841 = 563.50$ or 563 do not award 1 st mark				<u>with working</u>	<u>without working</u>	(a) 277.53	2/2	2/2	(b) 563.47	1/2	1/2	(c) 277.50 (841 – 563.50)	1/2	1/2	(d) 278 (841 – 563)	1/2	1/2	(e) 563.50, 563	see note 2	0/2
	<u>with working</u>	<u>without working</u>																		
(a) 277.53	2/2	2/2																		
(b) 563.47	1/2	1/2																		
(c) 277.50 (841 – 563.50)	1/2	1/2																		
(d) 278 (841 – 563)	1/2	1/2																		
(e) 563.50, 563	see note 2	0/2																		

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
3	<p>Ans: £928.80</p> <ul style="list-style-type: none"> •¹ interpret: find basic cost per room per night •² interpret/process: find total basic cost •³ interpret/process: find total cost 	<ul style="list-style-type: none"> •¹ 43 •² 1032 •³ 928.8(0) <p style="text-align: right;">3 marks</p>

NOTES:

1. Correct answer without working award 3/3

2. Some common answers (no working necessary)

(a)	232.2(0)	[43 × 6 × 0.9]	award 2/3	✓×✓
(b)	154.8(0)	[43 × 4 × 0.9]	award 2/3	✓×✓
(c)	38.7(0)	[43 × 0.9]	award 2/3	✓×✓
(d)	258	[43 × 6]	award 1/3	✓××
(e)	172	[43 × 4]	award 1/3	✓××
(f)	1036.8(0)	[48 × 6 × 4 × 0.9]	award 2/3	×✓✓
(g)	1152	[48 × 6 × 4]	award 1/3	×✓×
(h)	43.2(0)	[48 × 0.9]	award 1/3	××✓
(i)	1123.2(0)	[52 × 6 × 4 × 0.9]	award 2/3	×✓✓
(j)	1248	[52 × 6 × 4]	award 1/3	×✓×
(k)	46.8(0)	[52 × 0.9]	award 1/3	××✓

3. Some common answers (working must be shown)

(a)	387	[((43×6) + (43×4)) × 0.9]	award 2/3	✓×✓
(b)	430	[(43×6) + (43×4)]	award 1/3	✓ ××
(c)	296.7(0)	[(43 × 6) + (43 × 0.9)]	award 1/3	✓ ××

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •															
4 (a)	Ans: 2·5 • ¹ strategy: know to order numbers • ² process: find median	• ¹ 1 1 1 2 2 3 3 4 6 7 • ² 2·5 <p style="text-align: right;">2 marks</p>															
NOTES: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 35%; text-align: center;"><u>with valid working</u></td> <td style="width: 35%; text-align: center;"><u>without valid working</u></td> </tr> <tr> <td>1. Answer</td> <td></td> <td></td> </tr> <tr> <td>2·5</td> <td style="text-align: center;">2/2</td> <td style="text-align: center;">2/2</td> </tr> <tr> <td>4 (numbers not ordered)</td> <td style="text-align: center;">1/2</td> <td style="text-align: center;">0/2</td> </tr> <tr> <td>3 (mean)</td> <td style="text-align: center;">1/2</td> <td style="text-align: center;">0/2</td> </tr> </table> 2. If “correct” median is found from ordered list with one missing (or one extra) number award 1/2 3. Accept ordered list written in part (a) or part (b)				<u>with valid working</u>	<u>without valid working</u>	1. Answer			2·5	2/2	2/2	4 (numbers not ordered)	1/2	0/2	3 (mean)	1/2	0/2
	<u>with valid working</u>	<u>without valid working</u>															
1. Answer																	
2·5	2/2	2/2															
4 (numbers not ordered)	1/2	0/2															
3 (mean)	1/2	0/2															
4 (b)	Ans: 6 • ¹ strategy/process: find range	• ¹ 6 <p style="text-align: right;">1 mark</p>															
NOTES:																	
4 (c)	Ans: Less weeds remain with Noweed. Number of remaining weeds vary more with Noweed. • ¹ interpret/communicate: interpret calculated statistics • ² interpret/communicate: interpret calculated statistics	• ¹ Less weeds remain with Noweed or Noweed is a better weedkiller, etc. • ² Number of remaining weeds vary more with Noweed. <p style="text-align: right;">2 marks</p>															
NOTES: 1. Answer must be consistent with answers to parts (a) and (b) 2. Do not accept eg Weedclear’s median is more Noweed’s range is more																	

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
5	<p>Ans: 36 mph</p> <ul style="list-style-type: none"> •¹ strategy/process: calculate distance on motorway •² strategy/process: find distance on other roads •³ strategy: know how to find speed on other roads •⁴ process: calculate speed 	<ul style="list-style-type: none"> •¹ $2 \times 68 = 136$ •² $D = 54$ •³ $S = 54 \div 1\text{h } 30\text{m}$ •⁴ $54 \div 1.5 = 36$ <p style="text-align: right;">4 marks</p>

NOTES:

1. Answers without working

(a)	36	award 4/4	
(b)	136	award 1/4	✓xxx

2. For a **final answer** of 54

(a)	54 [190 – 136]	award 2/4	✓✓xx
(b)	54(·2...) [190 ÷ 3·5]	award 1/4	xxx✓
(c)	54 with no working	award 1/4	xxx✓

3. Examples of answers (working must be shown)

(a)	42, 41(·...)	[54 ÷ 1·3]	3/4 (disregard incorrect rounding)	✓✓✓x
(b)	0·6	[54 ÷ 90]	3/4	✓✓✓x
(c)	0·4...	[54 ÷ 130]	3/4	✓✓✓x
(d)	81	[54 × 1·5]	3/4	✓✓x✓
(e)	4860	[54 × 90]	2/4	✓✓xx
(f)	70(·2)	[54 × 1·3]	2/4	✓✓xx
(g)	7020	[54 × 130]	2/4	✓✓xx
(i)	81(·3...)	[(190–68)÷1·5]	3/4	x✓✓✓
(j)	1·3(5...)	[(190–68)÷90]	2/4	x✓✓x
(k)	94, 93(·...)	[(190–68)÷1·3]	2/4	x✓✓x
(l)	1, 0·9(...)	[(190–68)÷130]	2/4	x✓✓x
(m)	183	[(190–68)×1·5]	2/4	x✓x✓
(n)	10980	[(190–68) ×90]	1/4	x✓xx
(o)	159,158·6	[(190–68) ×1·3]	1/4	x✓xx
(p)	15860	[(190–68) ×130]	1/4	x✓xx
(q)	91, 90(·...)	[(68×2)÷1·5]	3/4	✓x✓✓
(r)	127, 126(·..)	[190÷1·5]	2/4	xx✓✓
(s)	34	[68÷2]	0/4	

4. 4th mark is not available for division by a whole number.

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •												
6	<p>Ans: 77</p> <ul style="list-style-type: none"> •¹ strategy/process: find angle at centre of “beetles” sector •² strategy: know how to find number of beetles •³ process: find number of beetles 	<ul style="list-style-type: none"> •¹ 126 •² $\frac{126}{360} \times 220$ •³ 77 <p style="text-align: right;">3 marks</p>												
	<p>Alternative Strategy</p> <ul style="list-style-type: none"> •¹ strategy: know to calculate 220 – (flies + ants + spiders) •² strategy: know how to find number of flies, ants and spiders •³ process: find number of beetles 	<ul style="list-style-type: none"> •¹ 220 – (flies + ants + spiders) •² flies = 220 ÷ 2, ants = 220 ÷ 10, spiders = ants ÷ 2 or equivalent •³ 77 <p style="text-align: right;">3 marks</p>												
<p>NOTES:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">1. Correct answer without working</td> <td style="width: 20%; text-align: center;">award 3/3</td> <td style="width: 20%;"></td> </tr> <tr> <td>2. 143 [flies + ants + spiders] (no working necessary)</td> <td style="text-align: center;">award 2/3</td> <td></td> </tr> <tr> <td>3. 57 [$\frac{126}{220} \times 100$] (no working necessary)</td> <td style="text-align: center;">award 1/3</td> <td></td> </tr> <tr> <td>4. $\frac{1}{3}$ of 220 = 73(.3...)</td> <td style="text-align: center;">award 0/3</td> <td></td> </tr> </table>			1. Correct answer without working	award 3/3		2. 143 [flies + ants + spiders] (no working necessary)	award 2/3		3. 57 [$\frac{126}{220} \times 100$] (no working necessary)	award 1/3		4. $\frac{1}{3}$ of 220 = 73(.3...)	award 0/3	
1. Correct answer without working	award 3/3													
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4. $\frac{1}{3}$ of 220 = 73(.3...)	award 0/3													

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
7	<p>Ans: 117 cm</p> <ul style="list-style-type: none"> •¹ strategy: correct form of Pythagoras Theorem •² process: calculate sum of two squares •³ process: calculate square root of sum (or difference) of two squares •⁴ strategy/process: add 20 to previously calculated value 	<ul style="list-style-type: none"> •¹ $80^2 + 55^2$ •² 9425 (the only cases where this mark is available for calculating the difference of two squares are shown in notes 2a and 3b) •³ 97(.08...) (correctly rounded or truncated) •⁴ 117 <p style="text-align: right;">4 marks</p>

NOTES:

1. Some common answers (no working necessary)

(a)	117		4/4	
(b)	97		3/4	✓✓✓×

2. Some common answers (working must be shown) where correct horizontal distance of 80 is used

(a)	78(...)	[$\sqrt{(80^2 - 55^2)} + 20$]	3/4	×✓✓✓
(b)	156(...)	[$\sqrt{(80^2 + 110^2)} + 20$]	3/4	×✓✓✓
(c)	95(...)	[$\sqrt{(110^2 - 80^2)} + 20$]	2/4	××✓✓

3. Some common answers (working must be shown) where incorrect horizontal distance of $80+20=100$ is used [4th mark is unavailable since 20 has been added inappropriately]

(a)	114(...)	[$\sqrt{(100^2 + 55^2)}$]	3/4	✓✓✓×
(b)	84,83(...)	[$\sqrt{(100^2 - 55^2)}$]	2/4	×✓✓×
(c)	149,148(...)	[$\sqrt{(100^2 + 110^2)}$]	2/4	×✓✓×
(d)	46,45(...)	[$\sqrt{(110^2 - 100^2)}$]	1/4	××✓×

4. Award of first 2 marks if trigonometry is used:

(a)	55 ÷ sin($\tan^{-1}(55/80)$) or 80 ÷ cos($\tan^{-1}(55/80)$)	award marks 1 & 2
(b)	eg 110 ÷ sin($\tan^{-1}(110/80)$)	award 1 of the first 2 marks

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
8	<p>Ans: 360 grams</p> <ul style="list-style-type: none"> •¹ strategy: know to calculate volume •² process: calculate volume •³ strategy: know to use proportion •⁴ strategy: carry out calculations correctly 	<ul style="list-style-type: none"> •¹ $10 \times 10 \times 3$ •² 300 •³ $\frac{300}{400} \times 480$ or equivalent •⁴ 360 <p style="text-align: right;">4 marks</p>

NOTES:

1. Correct answer without working award 4/4
2. Some common answers (no working necessary)
 - (a) 380 [300 + 80] award 2/4 ✓✓××
 - (b) 300 award 2/4 ✓✓××
3. Some common answers (working must be shown)
 - (a) $300 \div (480 \div 400) = 250$ award 3/4 ✓✓×✓
 - (b) $300 \times (400 \div 480) = 250$ award 3/4 ✓✓×✓

[Do not penalise premature rounding eg $400 \div 480 = 0.8 \times 300 = 240$]
4. Alternative strategy
 - (a) $300 + 300 \div 5 = 360$ (no working necessary) award 4/4
 - (b) $300 + 300 \div 6 = 350$ (working must be shown) award 3/4 ✓✓×✓

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
9	<p>Ans: £183.45</p> <ul style="list-style-type: none"> •¹ interpret/process: find cost of tickets in euros •² strategy: know how to convert cost into sterling •³ process: convert cost into sterling to the nearest penny 	<ul style="list-style-type: none"> •¹ 255 •² $255 \div 1.39$ •³ 183.45 <p style="text-align: right;">3 marks</p>

NOTES:

1. (a) Correct answer without working award 3/3
 (b) 354.45 [255×1.39] (no working necessary) award 1/3 ✓××

2. Alternative strategy

• ¹ interpret/strategy: know how to convert valid number of euros into sterling	• ¹ $90 \div 1.39$ or $75 \div 1.39$ or $180 \div 1.39$
• ² process: convert valid cost into sterling to the nearest penny	• ² $90 \div 1.39 = 64.74$ or 64.75 or $75 \div 1.39 = 53.95$ or 53.96 or $180 \div 1.39 = 129.49$ or 129.50
• ³ interpret/strategy: find total cost of tickets in sterling	• ³ 183.43 or 183.44 or 183.45 or 183.46

3. Where working shows that candidate has used alternative strategy award 3/3 for final answers of 183.43, 183.44 or 183.46

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
10 (a)	Ans: £27·20 • ¹ strategy/process: find 1·6% of 1700	• ¹ £27·2(0) <p style="text-align: right;">1 mark</p>
NOTES: 1. 1727·2(0) [27·2(0) + 1700] can only be awarded the mark if the candidate states that the interest is 27·2(0) 2. Mark not available for invalid working subsequent to correct interest e.g. 27·2(0) ÷ 12 = 2·66 or 2·67 award 0/1		
(b)	Ans: £2057 • ¹ strategy/process: find 21% of 1700 • ² strategy/process: add interest onto loan	• ¹ 357 • ² 2057 <p style="text-align: right;">2 marks</p>
NOTES: 1. Correct answer without working award 2/2 2. 2026·4(0) [(27·2(0)×12) + 1700] award 1/2 ×✓ 3. 2 nd mark only available for correctly adding a calculated value onto 1700		

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
11	<p>Ans: 438·70</p> <ul style="list-style-type: none"> •¹ interpret/process: interpret table •²•³ strategy/process: find overtime pay •⁴ strategy/process: find total pay 	<ul style="list-style-type: none"> •¹ 3 hours @ time and a half and 7 hours @ double time •²•³ 151·7(0) [award 1 for time and half = 36·9(0) or double time = 49·2(0) + 65·6(0) or overtime rates = 12·3(0) and 16·4(0)] •⁴ 438·7(0) <p style="text-align: right;">4 marks</p>

NOTES:

1. Correct answer without working award 4/4
2. Acceptable alternative strategy for calculating overtime: $4\cdot5\times8\cdot2(0) + 14\times8\cdot2(0)$
3. Some common answers

(a) 369 [3×8·2(0) + 7×8·2(0) + 287] (working must be shown)	award 2/4	✓××✓
(b) 369 [10×8·2(0) + 287 or 45×8·2(0)] (working not necessary)	award 1/4	×××✓
(c) 369 (with no working)	award 1/4	×××✓
4. Some common answers (working not necessary)

(a) 717·5(0) [1·5×287 + 287 or 2·5×287]	award 1/4	×××✓
(b) 430·5(0) [1·5×287]	award 0/4	
5. A common answer (working must be shown)

414·1(0) [3×4·1(0) + 7×16·4(0) + 287]	award 3/4	✓×✓✓
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Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
12	<p>Ans: 141 cm²</p> <ul style="list-style-type: none"> •¹ strategy: know how to find curved surface area •² process: substitute correct radius (or correct diameter) and height into formula involving π •³ process: carry out calculation involving π 	<ul style="list-style-type: none"> •¹ $2\pi rh$ or πdh •² $2 \times \pi \times 9 \times 2.5$ or $\pi \times 18 \times 2.5$ •³ 141(.37...) <p style="text-align: right;">3 marks</p>

NOTES:

1. Correct answer without working award 3/3
2. Disregard premature or incorrect rounding
3. Some common answers (working must be shown)

(a) 282.6, 282.7(...) or 283	[$2\pi rh = 2 \times \pi \times 18 \times 2.5$]	award 2/3	✓×✓
(b) 282.6, 282.7(...) or 283	[$2 \times \pi \times 18 \times 2.5$]	award 1/3	××✓
(c) 113(...)	[$2\pi rh = 2 \times \pi \times 18$]	award 2/3	✓×✓
(d) 15.7(...) or 16	[$2 \times \pi \times 2.5$]	award 1/3	××✓
(e) 70.6(...) or 71	[$\pi rh = \pi \times 9 \times 2.5$]	award 2/3	×✓✓
(f) 254(...)	[$\pi r^2 = \pi \times 9^2$]	award 1/3	××✓
(g) 56.5(...) or 57	[$\pi r^2 = \pi \times 9^2 = \pi \times 18$]	award 0/3	
(h) 56.5(...) or 57	[$\pi d = \pi \times 18$]	award 1/3	××✓
4. 650(...), 649(...) [total surface area] or 396, 395(...) [curved surface + area of one circular face]

(a) if the candidate states that curved surface area is 141(.37...)	award 3/3
(b) otherwise (no working necessary)	award 2/3

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
13	<p>Ans: 7.5%</p> <ul style="list-style-type: none"> •¹ strategy: find weight loss •² strategy: know to express loss as a fraction of 80 •³ strategy: know to multiply fraction by 100 •⁴ process: carry out all calculations correctly 	<ul style="list-style-type: none"> •¹ 6 •² $\frac{6}{80}$ •³ $\frac{6}{80} \times 100$ •⁴ 7.5 <p style="text-align: right;">4 marks</p>

NOTES:

1. Correct answer without working award 4/4
2. Some common answers (working must be shown)

(a) 92.5	[$\frac{74}{80} \times 100$]	award 3/4	×✓✓✓
(b) 8(...)	[$\frac{6}{74} \times 100$]	award 3/4	✓×✓✓
(c) 1333(...)	[$\frac{80}{6} \times 100$]	award 3/4	✓×✓✓
(d) 108(...)	[$\frac{80}{74} \times 100$]	award 2/4	××✓✓
(e) 4.8	[$\frac{6}{100} \times 80$]	award 2/4	✓××✓
(f) 4.44	[$\frac{6}{100} \times 74$]	award 2/4	✓××✓
(g) 59.2	[$\frac{74}{100} \times 80$ or $\frac{80}{100} \times 74$]	award 1/4	×××✓

Question No	Marking Scheme Give 1 mark for each •	Illustrations of evidence for awarding a mark at each •
14	<p>Ans: 63 m²</p> <ul style="list-style-type: none"> •¹ strategy: know to calculate area of semi-circle •² strategy: substitute correct radius into area formula •³ strategy: know to add area of triangle to area of semi-circle •⁴ process: carry out all calculations correctly (must include a circle calculation involving either squaring or halving followed by an addition or a subtraction) 	<ul style="list-style-type: none"> •¹ $\frac{1}{2} \pi r^2$ •² $\frac{1}{2} \times \pi \times 5^2$ •³ $\frac{1}{2} \times \pi \times 5^2 + \frac{1}{2} \times 8 \times 6$ •⁴ $63(\cdot 2699\dots)$ or $63(\cdot 25)$ (π) (3·14) <p style="text-align: right;">4 marks</p>

NOTES:

1. Correct answer without working award 0/4
2. **Beware!!!**
3rd mark not available for adding $8+6+10=24$ to area of semi-circle
eg (i) $\frac{1}{2} \times \pi \times 5^2 + \frac{1}{2} \times 8 \times 6 = 63$ award 4/4
(ii) $\frac{1}{2} \times \pi \times 5^2 + 8+6+10 = 63$ award 3/4 ✓××✓
(iii) $\frac{1}{2} \times \pi \times 5^2 + 24 = 63$ award 3/4 ✓××✓
3. Some common answers (working must be shown)

(a) 181(·...)	[$\frac{1}{2} \pi r^2 + \frac{1}{2} \times 8 \times 6, r=10$]	award 3/4	✓××✓✓
(b) 157(·...)	[$\frac{1}{2} \pi r^2, r=10$]	award 1/4	✓×××
(c) 102(·...), 103	[$\pi r^2 + \frac{1}{2} \times 8 \times 6$]	award 3/4	×✓✓✓✓
(d) 87(·...)	[$\frac{1}{2} \pi r^2 + 48$]	award 3/4	✓✓×✓✓
(e) 79,78(·...)	[πr^2]	award 1/4	×✓××
(f) 79(·...)	[$\pi d + 48, d=10$]	award 1/4	×✓××
(g) 63(·...), 64	[$\frac{1}{2} \pi r^2 + 48, r^2=5^2=10$]	award 2/4	✓✓××
(h) 63(·...), 64	[$\frac{1}{2} \pi d + 48, d=10$]	award 2/4	×✓×✓✓
(i) 55(·...)	[$\pi r^2 + \frac{1}{2} \times 8 \times 6, r^2=5^2=10$]	award 2/4	×✓✓✓×
(j) 55(·...)	[$\pi d + \frac{1}{2} \times 8 \times 6, d=10$]	award 2/4	×✓✓✓×
(k) 39(·...), 40	[$\frac{1}{2} \pi r^2 + \frac{1}{2} \times 8 \times 6, r^2=5^2=10$]	award 3/4	✓✓✓✓×
(l) 39(·...), 40	[$\frac{1}{2} \pi d + \frac{1}{2} \times 8 \times 6, d=10$]	award 3/4	×✓✓✓✓
(m) 39(·...)	[$\frac{1}{2} \pi r^2$]	award 2/4	✓✓××

TOTAL MARKS FOR PAPER 2

50

**TOTAL MARKS FOR
PAPER 1 & 2**

80

[END OF MARKING INSTRUCTIONS]