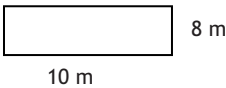


Specification A: Paper 2 Foundation Tier

1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
1.	$1.60 + 2.05 = 3.65$	15p	2	B1 £3.65 oe B1 15p
Total for Question: 2 marks				
2.	(a)(i)	60	2	B1 60 cao
	(ii)	50		B1 50 cao
	(b)	2 full packets 1.5 full packets	2	B1 2 full packets cao B1 1.5 full packets
Total for Question: 4 marks				
3.	(a)	$\frac{3}{4}$	2	B2 $\frac{3}{4}$ cao (B1 $\frac{18}{24}, \frac{12}{16}, \frac{9}{12}, \frac{6}{8}$)
	(b)	Any 16 squares shaded	1	B1 Any 16 squares shaded
Total for Question: 3 marks				

1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
4.	(a)	2	1	B1 cao
	(b)	$7 + 4 + 3 + 5 + 2 + 4 + 5 = 30$ $6 + 2 + 1 + 5 + 3 + 3 + 8 = 28$ OR $1 + 2 + 2 + 0 - 1 + 1 - 3 = 2$	2 hours 2	M1 finds the totals of Robin and Helen. A1 cao OR M1 find the differences of Robin and Helen A1 cao
	(c)	2 3 4 4 5 5 7	4 hours 2	M1 orders the values A1 cao
	(d)	$(6 + 8) \div 7$	2 2	M1 attempts to find mean A1 2 cao
Total for Question: 7 marks				
5.	(a)	Correct plot	1	B1 Cross placed within 0.5 cm to right of 0 inclusive
	(b)	Correct plot	1	B1 Cross placed within 0.5 cm to left of 1 inclusive
	(c)	$\frac{1}{2}$	1	B1 0.5 oe
Total for Question: 3 marks				

1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
6.	(i)	5 or 17	1	B1 5 or 17 or both
	(ii)	4, 8, or 16	1	B1 for one, two or three of 4, 8 or 16
	(iii)	5 and 6	1	B1 5 and 6 oe
	(iv)	8	1	B1 cao
Total for Question: 4 marks				
7.	8.5 cm line drawn angles at B and C drawn	Correct Construction of triangle	3	B1 8.5 cm line drawn tolerance $\pm 0.2\text{cm}$ B1 angles at B and C drawn tolerance $\pm 2^\circ$ B1 fully correct within tolerance
Total for Question: 3 marks				
8.	(a)	B, A, C	1	B1 cao
	(b)	£40	1	B1 cao
	(c)	C + reason	2	C2 correct + comparison with the two other tariffs (C1 correct + comparison with one other tariff or line drawn at 60 up from the time axis to intersect at least one line)
Total for Question: 4 marks				
9.	153 + 400 + 413 = 966 Number of litres used = $966 \div 6 = 161$ Cost of fuel $161 \times 98.9\text{p} =$ £159.23 Day cost = $3 \times 90 = 270$ Total = £159.23 + £270	429.23	8	B1 any one correct distance identified M1 $153 + 400 + 413$ A1 966 M1 '966' $\div 6$ M1 '161' $\times 98.9$ M1 3×90 M1 '159.23' + '270' A1 cao
Total for Question: 8 marks				

1MA0/2F					
Question	Working	Answer	Mark	Additional Guidance	
10.	(a)	$\frac{156 + 174 - 12.5}{2}$	157.75	2	M1 substitute correctly A1 157.75 or 158
	(b)	$\frac{j + j - 12.5}{2} = 162$ $2j - 12.5 = 324$ $\frac{324 + 12.5}{2}$	168	3	M1 $\frac{j + j - 12.5}{2} = 162$ M1 correct method to isolate j A1 168 or better
Total for Question: 5 marks					
11.	(a)	complete diagram at end 		4	M1 quarter circle centre D radius 4 cm A1 clear indication of region by shading in or shading out M1 straight line parallel to BC 3 cm away A1 clear indication of the region by shading in or shading out.
	(b) QWC i, ii	Area = $\frac{\pi \times 4^2}{4} = 12.56637\dots$ Area = $3 \times 8 = 24$	43	6	M1 $\pi \times 4^2$ M1 3×8 A1 sight of either correct area A1 36.56637... M1 $8 \times 10 - '36.56637\dots' = 43.4336\dots$ C1 43 QWC: Decision should be stated, following on from working out
Total for Question: 10 marks					
12. FE		$3 \times 2.5 = 7.50$ $4 \times 1.75 = 7$ $75.50 + 7.50 + 7 = 90$ $9 + 4.5 + 2.25 = 15.75$	105.75	6	B1 3 and 7.50 B1 4 and 7 B1 90 ft M1 $9 + 4.5 + 2.25$ seen A1 15.75 A1 cao
Total for Question: 6 marks					
13.			154°	3	B1 for 38° B1 for 64° B1 cao
Total for Question: 3 marks					

1MA0/2F					
Question		Working	Answer	Mark	Additional Guidance
14.		$2x + 2x + 40 + 3x - 30 + 150 - x$ $+ 2x = 540$ $8x + 140 = 540$ $x = 50$	100°	4	M1 $2x + 2x + 40 + 3x - 30 + 150 - x + 2x$ M1 collects terms correctly A1 $x = 50$ A1 cao
Total for Question: 4 marks					
15.	(a)		5 m	1	B1 cao
	(b)		10:30	1	B1 10:25 – 10:35
	(c)		18:10 – 18:30	1	B1 18:10 – 18:30
Total for Question: 3 marks					
16.		$\frac{\sqrt{6.4}}{8.15}$	0.31040762 ...	2	M1 correct order of evaluation as evidenced by sight of 6.4 or 8.15 A1 0.31040(762....)
Total for Question: 2 marks					

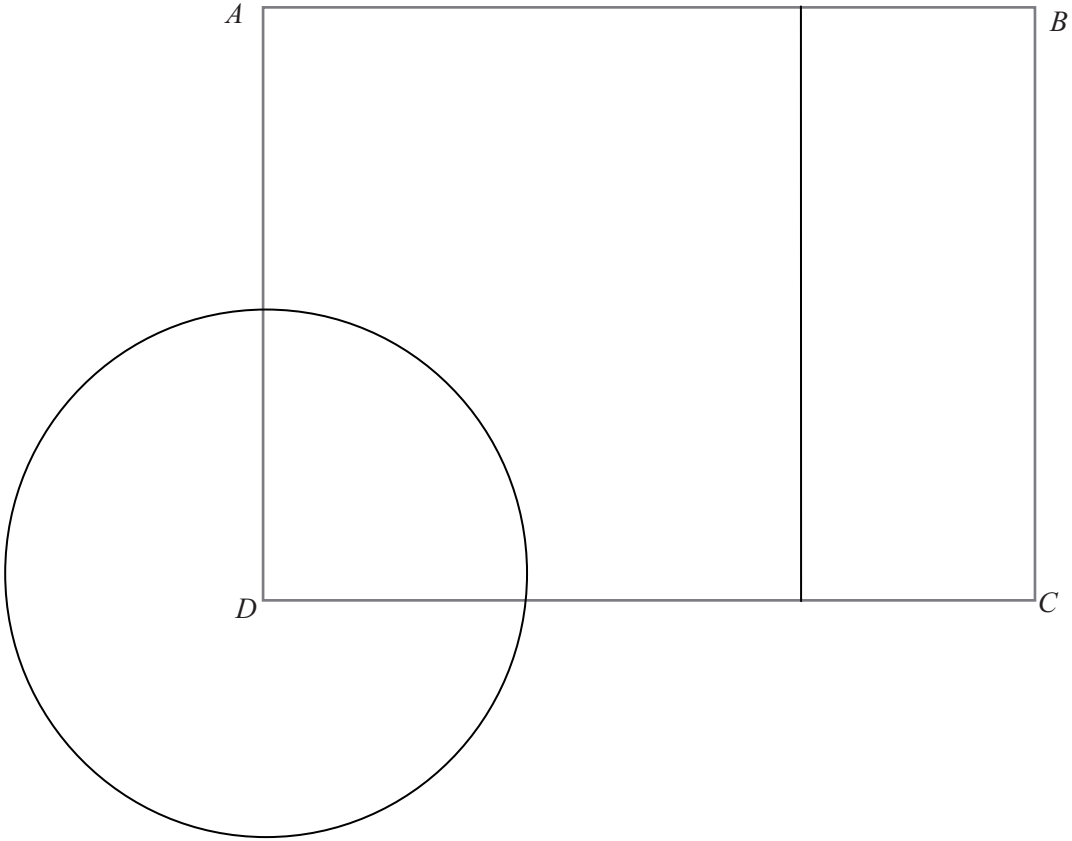
1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
17.	$f(x) =$ $x^3 - 5x$ 4.00 44.00 4.10 48.42 4.20 53.09 4.30 58.01 4.40 63.18 68.62 or 4.50 68.63 4.60 74.34 4.70 80.32 4.80 86.59 4.90 93.15 5.00 100.00 4.35 60.56	4.3	4	B2 for trial between 4.3 and 4.4 inclusive (B1 for trial between 4 and 5 inclusive) B1 for different trial between 4.33 and 4.37 inclusive B1 (dep on at least one previous B1) for 4.3 only NB trials where x has 1 d.p should be rounded or truncated to at least 2 SF; trials where x has 2 d.p. or more should be rounded or truncated to at least 3 SF
				Total for Question: 4 marks
18. QWC ii	Alan $60 + 80 = 140$ $140 \div 5 = 28$ Bhavana $60^2 + 80^2 = 10000$ $\sqrt{10000} = 100$ $100 \div 3 = 33.33333.....$	Alan, with statement supporting explanation	6	B1 Alan runs 140 M1 '140' $\div 5$ M1 $60^2 + 80^2$ A1 100 A1 28 or 33.33333... seen C1 Alan stated with comparison of times and times attributed to correct person QWC: Decision stated with statement supporting explanation
				Total for Question: 6 marks

1MA0/2F																															
Question		Working	Answer	Mark	Additional Guidance																										
19.	(a)	0, -2, -2, 0, 4, 10	-2, 10	1	B1, B1 for each cao																										
	(b)		Smooth curve	2	B1 correct plot of their values B1 smooth curve through their points providing at least 1 mark earned in (a)																										
	(c)	<p>Draws $y = 7$</p> <p>OR</p> <p>T&I</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Width</th> <th>Area</th> </tr> </thead> <tbody> <tr><td>4</td><td>4</td></tr> <tr><td>4.1</td><td>4.51</td></tr> <tr><td>4.2</td><td>5.04</td></tr> <tr><td>4.3</td><td>5.59</td></tr> <tr><td>4.4</td><td>6.16</td></tr> <tr><td>4.5</td><td>6.75</td></tr> <tr><td>4.6</td><td>7.36</td></tr> <tr><td>4.7</td><td>7.99</td></tr> <tr><td>4.8</td><td>8.64</td></tr> <tr><td>4.9</td><td>9.31</td></tr> <tr><td>5</td><td>10</td></tr> <tr><td>4.55</td><td>7.0525</td></tr> </tbody> </table>	Width	Area	4	4	4.1	4.51	4.2	5.04	4.3	5.59	4.4	6.16	4.5	6.75	4.6	7.36	4.7	7.99	4.8	8.64	4.9	9.31	5	10	4.55	7.0525	4.5	2	<p>M1 draw $y = 7$</p> <p>A1 4.5 – 4.6 ft from graph</p> <p>OR</p> <p>Uses T&I</p> <p>B2 4.5 with $x^2 - 3x$ evaluated correctly at 4.5 and 4.6 (B1 Locates 'root' between 4 and 5 at least 2 evaluations or refers to table)</p>
Width	Area																														
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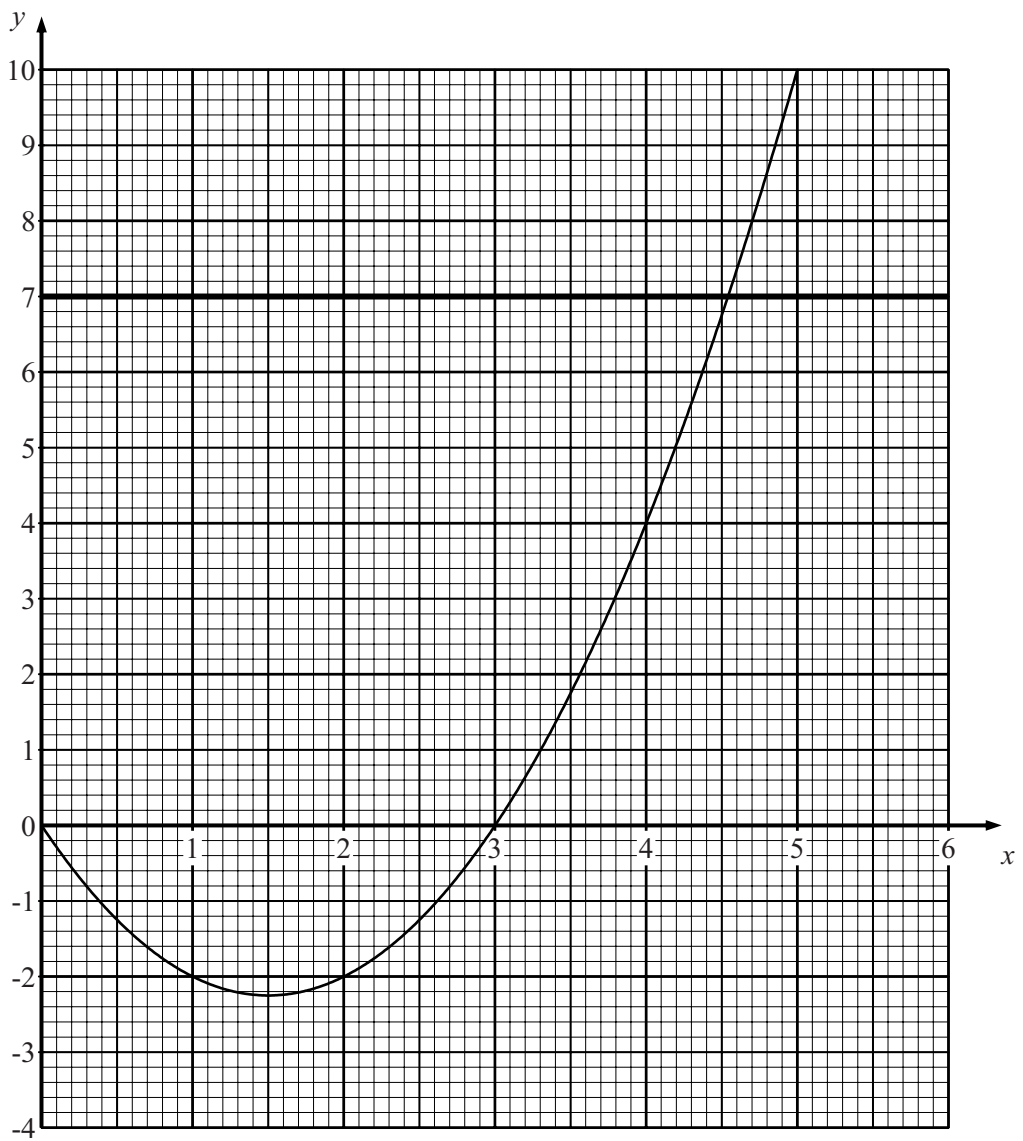
1MA0/2F				
Question	Working	Answer	Mark	Additional Guidance
20. FE	Area of land = 30×10 = 300 m^2 Perimeter of land = $30 + 30 + 10 + 10 = 80 \text{ m}$ No. of hens = $300 \div 0.8 = 375$ Cost of hens = $375 \times 7.5 =$ £2812.50 Cost of fencing = 80×9.85 = £788 Total cost = $\text{£}2812.50 + \text{£}788$ = £3600.50	£3600.50	9	M1 for area of land $30 \times 10 = 300\text{m}^2$ M1 for perimeter of land = $30 + 30 + 10 + 10 = 80\text{m}$ M1 for " 300 " $\div 0.8$ A1 (ft) for 375 hens M1 for " 375 " $\times 7.5$ A1 (ft) for £2812.50 M1 for " 80 " $\times 9.85$ A1 (ft) for £788 A1 cao for total cost
				Total for Question: 9 marks

1MA0/2F					
Question		Working	Answer	Mark	Additional Guidance
21. FE	(a)	Plots further data Draws line of best fit Reads off value from 2500	£ 1100– 1200	3	M1 plots further figures M1 draws line of best fit A1 1100 – 1200
	(b)	Draws $y = 1000$ '2000' $\div 48$	42	2	M1 draws $y = 1000$ and divides by 48 A1 40 – 44
Total for Question: 5 marks					

11.



Scale 1 cm represents 1 m



21.

