

Question		Answer	Marks	Part Marks and Guidance	
1	(a)	6 [equal] sides Area of one side is $x \times x$ or x^2	1 1		
	(b)	[0] 6 24 54 96 150	2	B1 for 3 values correct	
	(c)	Their 6 points correctly plotted Curve through their 6 points	1 1	$\pm\frac{1}{2}$ small square horiz or vert Within $\frac{1}{2}$ small square horiz or vert	Not too thick or hairy
	(d)	3.2 to 3.6	1		

2	(a)	-- -- 12 -- 11.25 --	1,1		
	(b)	<i>Their</i> 6 points correctly plotted Curve through <i>their</i> 6 points	1 FT 1 FT	$\pm\frac{1}{2}$ small square. Allow 1 error/omission Within $\frac{1}{2}$ small square of points	Ignore curve outside the 6 points
	(c)	$14 < h \leq 15$	1		
	(d)	3.2 to 3.6	1		

3	(a)	..., 2, 0, ..., ..., 6	2	B1 for 2 values correct	
	(b)	<i>Their</i> 6 points correctly plotted Curve through <i>their</i> 6 points	2FT 1FT	B1 for 4 of <i>their</i> points correctly plotted Curve must go below x-axis. Not too 'hairy'	$\pm \frac{1}{2}$ small square $\pm \frac{1}{2}$ small square
	(c)	1.2 to 1.4 and -2.2 to -2.4	2	B1 for one value correct	
	(d)	Ruled graph of $y = x + 2$ $x = 1.3$ to 1.5 $y = 3.3$ to 3.5 $x = -1.3$ to -1.5 $y = 0.5$ to 0.7	M1 B1 B1	After B0 , allow SC1 for any two of the four values correct and in correct place or for both pairs correct but answers reversed	

4	(a)	..., ..., -1, ..., ..., 8	2	B1 for one value correct	
	(b)	<i>their</i> 6 points correctly plotted <u>U shaped curve</u> through <i>their</i> six points	1 1	$\pm \frac{1}{2}$ small square Within $\frac{1}{2}$ small square of each point	
	(c)	$x = 1.55$ to 1.7 $y = -0.9$ to -0.6 $x = 4.3$ to 4.6 $y = 4.6$ to 5.2	1 1	<u>After zero</u> : SC1 for two correct x values	

5	(a)		Splitting into rectangles and correctly finding the areas in terms of x	M2	M1 for splitting into rectangles and correctly trying to find area of one in terms of x	Eg for M2 $x \times x + 2x \times 3$ $x \times x + x \times 3 + x \times 3$ $x \times (x + 3) + x \times 3$ $2x \times (x + 3) - x \times x$ Etc
	(b)		7, 55	1, 1		
	(c)		5 or 6 points correctly plotted <u>Curve</u> joining 5 or 6 points	1FT 1FT	Within half small square of <i>their</i> 'correct' position Within half small square of <i>their</i> points	

6	(a)		0.5 to 0.6 inclusive -3.5 to -3.6 inclusive	1 1	Or SC1 for (0.5 to 0.6, -3.5 to -3.6) or (-3.5 to -3.6, 0.5 to 0.6)	Throughout Q17 do not accept (x, y) coordinate point answers
	(b)		Correct graph of $y = x + 2$ 1.2 to 1.3 -3.2 to -3.3	M1 A1 A1	After M1 : SC1 for (1.2 to 1.3, -3.2 to -3.3) or (-3.2 to -3.3, 1.2 to 1.3) After M0 : SC2 for <i>their</i> 2 correct x values ± 0.1 Or SC1 for <i>their</i> 1 correct x value ± 0.1	FT only for straight line graph through (0, 2) and with +ve or -ve gradient. Curve may be extended for FT SC marks

7			$y = x^2 + 4$ $y = x^3 - 2x$ $y = \sin x$	1 1 1		-1 once for omission of y =
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