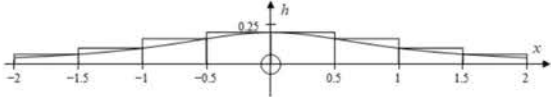


Question			Answer	Marks	AOs		Guidance																		
8	(a)		<div></div> <table border="1" data-bbox="291 232 1023 397"><tr><td>x</td><td>0</td><td>± 0.5</td><td>± 1</td><td>± 1.5</td><td>2</td></tr><tr><td>h</td><td>$\frac{1}{5}$</td><td>$\frac{4}{25}$</td><td>$\frac{1}{10}$</td><td>$\frac{4}{65}$</td><td>$\frac{1}{25}$</td></tr><tr><td>h</td><td>0.2</td><td>0.16</td><td>0.1</td><td>0.061538</td><td>0.04</td></tr></table> <p>$= 2 \times 0.5(0.2 + 0.16 + 0.1 + 0.061538)$</p> <p>$= 0.522$ to 3sf</p>	x	0	± 0.5	± 1	± 1.5	2	h	$\frac{1}{5}$	$\frac{4}{25}$	$\frac{1}{10}$	$\frac{4}{65}$	$\frac{1}{25}$	h	0.2	0.16	0.1	0.061538	0.04	M1	3.4	Finding at least 2 distinct values for h Need not be a table of values	
x	0	± 0.5	± 1	± 1.5	2																				
h	$\frac{1}{5}$	$\frac{4}{25}$	$\frac{1}{10}$	$\frac{4}{65}$	$\frac{1}{25}$																				
h	0.2	0.16	0.1	0.061538	0.04																				
				M1	1.1a	Using rectangles forming UB for area with width 0.5. Need not be drawn	Allow both M marks if only half the area considered.																		
				A1	1.1																				
				[3]																					
8	(b)		<p>Area $\approx \frac{0.5}{2}(0.2 + 0.04 + 2(0.16 + 0.1 + 0.061538))$</p> <p>$= 0.221$ (to 3 sf)</p>	M1	1.1a	Using trapezium rule with 5 h values FT incorrect h values for the M mark Allow awrt 0.22	Using the definite integral functionality of calculator gives 0.2214297... So method must be seen.																		
				A1	1.1																				
				[2]																					
8	(c)		<p>Volume $= 2 \times (0.2208 \times 10)$</p> <p>$= 4.42 \text{ m}^3$</p>	M1	1.1a	Condone missing factor of 2 for method mark FT part (b)																			
				A1	1.1																				
				[2]																					