

Question number	Scheme	Marks																
8 (a)	<table><tr><td>x</td><td>0</td><td>0.25</td><td>0.5</td><td>1</td><td>1.5</td><td>2</td><td>3</td></tr><tr><td>y</td><td>2</td><td>2.41</td><td>2.69</td><td>3.10</td><td>3.39</td><td>3.61</td><td>3.95</td></tr></table>	x	0	0.25	0.5	1	1.5	2	3	y	2	2.41	2.69	3.10	3.39	3.61	3.95	B2 [2]
x	0	0.25	0.5	1	1.5	2	3											
y	2	2.41	2.69	3.10	3.39	3.61	3.95											
(b)	Points plotted within half of a square Points joined together in a smooth curve	B1ft B1ft [2]																
(c)	$\ln(2x+1) = 3x-4 \Rightarrow \ln(2x+1)+2 = 3x-2$ Graph of $y = 3x-2$ drawn. Intersection point is at $x = 1.8$ or 1.9 (Accept either)	M1 M1A1 [3]																
(d)	$e^{(6-x)} = (2x+1)^2 \Rightarrow 6-x = \ln(2x+1)^2 \Rightarrow 6-x = 2\ln(2x+1)$ $\Rightarrow \ln(2x+1)+2 = 5-\frac{x}{2}$ Graph of $y = 5-\frac{x}{2}$ drawn. Intersection point is at $x = 2.4$ or 2.5 (Accept either)	M1 M1 M1A1 [4]																
Total 11 marks																		
(a) B2	All 3 points correct (B1 for 2 points correct)																	
(b) B1ft B1ft	Points plotted fit their table allow half a square tolerance Points joined together with a smooth curve fit their table																	
(c) M1	$\ln(2x+1)+2 = 3x-2$																	
M1	$y = 3x-2$ drawn.																	
A1	Intersection point is at ($x =$) 1.8 or 1.9 Accept either																	
(d) M1	$6-x = 2\ln(2x+1)$																	
M1	$\ln(2x+1)+2 = 5-\frac{x}{2}$																	
M1	Graph of $y = 5-\frac{x}{2}$ drawn																	
A1	Intersection point is at ($x =$) 2.4 or 2.5 Accept either																	