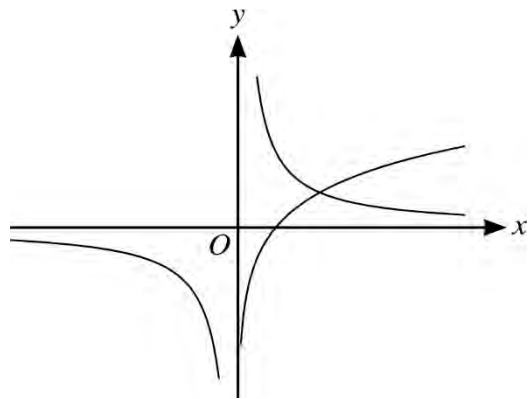| 2 | (a) | | B2 | 1.1
1.1 | Excellent curve for $y = kx^{-1}$ in both quadrants:

• Correct shape, rotational symmetry about O, not touching axes
• Asymptote clearly the axes
• Not finite (i.e. extending to the ends of the axes)
• Allow slight movement away from asymptote at one end but not more | **N.B. Ignore 'feathering' now that answers are scanned.**

B1 only – correct shape in 1st and 3rd quadrants only. Graph must not touch axes more than once. Finite 'plotting' condoned. |

Question			Answer	Marks	AO	Guidance	
				B1	**1.1**	Correct curve for $y = \ln x$ in 1st and 4th quadrants – asymptote clearly the y-axis	For full marks curves should only intersect once in the 1st quadrant
				[3]			
2	**(b)**		$x \ln x - k = 0$ is a rearrangement of the equation $\ln x = \dfrac{k}{x}$	**B1**	**2.4**	Either explained or shown algebraically	
			The curves intersect at a single point (and so therefore the equation $x \ln x - k = 0$ has only one real root)	**B1 FT**	**2.4**	Follow through from incorrect curves provided they only intersect once.	Intersection in the 1st quadrant
				[2]			