Question	Scheme	Marks	AOs
4	Writes $\int \frac{t+1}{t}\,\mathrm{d}t = \int 1+\frac{1}{t}\,\mathrm{d}t$ and attempts to integrate	M1	2.1
	$= t + \ln t \ (+c)$	M1	1.1b
	$(2a + \ln 2a) - (a + \ln a) = \ln 7$	M1	1.1b
	$a = \ln\frac{7}{2}$ with $k = \frac{7}{2}$	A1	1.1b
			(4 marks)

Notes:

M1: Attempts to divide each term by t or alternatively multiply each term by t^{-1}

M1: Integrates each term and knows $\int \frac{1}{t}\,\mathrm{d}t = \ln t$. The $+ c$ is not required for this mark

M1: Substitutes in both limits, subtracts and sets equal to ln7

A1: Proceeds to $a = \ln\frac{7}{2}$ and states $k = \frac{7}{2}$ or exact equivalent such as 3.5