

Question	Scheme	Marks	AOs
4	e.g. $\log_2(x+2) + \log_2(x+3) = \log_2(x+2)(x+3)$ $2\log_2 x = \log_2 x^2$	B1	1.2
	$\log_2(x+2)(x+3) - \log_2 x^2 = \log_2 2$ $\Rightarrow \log_2 \frac{(x+2)(x+3)}{x^2} = \log_2 2 \Rightarrow (x+2)(x+3) = 2x^2$	M1	2.1
	$x^2 - 5x - 6 = 0 \Rightarrow x = -1, 6$	dM1	1.1b
	$x = 6$	A1	2.3
		(4)	

(4 marks)

Notes

B1: Recalls at least one rule of logs correctly (but not for just $1 = \log_2 2$)

M1: Applies a correct strategy including the use of $1 = \log_2 2$ to remove the logs to obtain a quadratic equation in x

dM1: Solves the resulting 3TQ (may only see the positive root)

A1: This is for $x = 6$ only and no other values offered or not clearly rejected