

Question	Scheme	Marks	AOs
6	$3^{3(2x-3)} = \frac{1}{3^2 \times 3^{\frac{1}{2}}}$	M1	3.1a
	$3^{6x-9} = 3^{-\frac{5}{2}} \Rightarrow 6x-9 = -\frac{5}{2} \Rightarrow x = \dots$	M1	1.1b
	$x = \frac{13}{12}$	A1	1.1b
		(3)	

(3 marks)

Notes

M1: Attempts to write each number in base 3. May alternatively write each number in another base e.g. 9

M1: Manipulates the equation to $3^{\dots} = 3^{\dots}$ or $3^{\dots} = 1$, proceeds to a linear equation in x and attempts to solve. (Alternatively may manipulate the equation to e.g. $9^{\dots} = 9^{\dots}$ first)
Condone slips on expanding the brackets before proceeding to a linear equation in x .

A1: $x = \frac{13}{12}$ or exact equivalent