Question Number	Scheme	Marks
5		
(a)	$x^2 - \frac{7}{2}x + 2 \ (=0)$	M1
	$2x^2 - 7x + 4 = 0$	A1 (2)
(b)	$\frac{\alpha}{\beta} \times \frac{\beta}{\alpha} = 1$	B1
	$\frac{\alpha}{\beta} + \frac{\beta}{\alpha} = \frac{(\alpha+\beta)^2 - 2\alpha\beta}{\alpha\beta}$	M1
	$\frac{\frac{49}{4} - 4}{2}, = \frac{33}{8}$	dM1A1
	$x^2 - \frac{33}{8}x + 1 \ (=0)$	M1
	$8x^2 - 33x + 8 = 0$	A1 (6) **[8]**

(a)	
M1	Use $x^2 - (\text{sum of roots})x + \text{product of roots}$ (= 0 may be missing)
A1	Correct equation as shown or any **integer** multiple of this. Must have = 0 NB: A correct equation with no working scores 2
ALT	
M1	Eliminate α (or β) between the 2 equations and multiply through by α (or β)
A1	A correct quadratic equation with integer coefficients. Unknown can be α (or β)
NB;	isw any attempt to solve their equation.
(b)	
B1	Correct product of roots, seen explicitly or used.
M1	Attempt a single fraction for the sum of the roots with the numerator ready for substitution of known quantities. Denominator must be $\alpha\beta$.
dM1	Substitute numbers in their single fraction.
A1	Correct value for sum (as shown or equivalent fraction)
M1	Use $x^2 - (\text{sum of roots})x + \text{product of roots}$ (= 0 may be missing)
A1	Correct equation as shown or any **integer** multiple of this. Must have = 0