Question	Scheme	Marks
2	$\alpha+\beta=-\left(-\frac{5}{3}\right)=\frac{5}{3},\quad \alpha\beta=\frac{1}{3}$	B1,B1
	$\alpha^2+\beta^2=(\alpha+\beta)^2-2\alpha\beta\Rightarrow\left(\frac{5}{3}\right)^2-2\times\frac{1}{3}=\frac{19}{9}$	B1
	PRODUCT: $\frac{\alpha}{2\beta}\times\frac{\beta}{2\alpha}=\frac{1}{4}$	B1
	SUM: $\frac{\alpha}{2\beta}+\frac{\beta}{2\alpha}=\frac{2\alpha^2+2\beta^2}{4\alpha\beta}=\left[\frac{\alpha^2+\beta^2}{2\alpha\beta}\right]\Rightarrow\frac{\alpha}{2\beta}+\frac{\beta}{2\alpha}=\frac{\frac{19}{9}}{\frac{2}{3}}=\frac{19}{6}$	M1A1
	EQUATION: $x^2-\frac{19}{6}x+\frac{1}{4}=0\Rightarrow 12x^2-38x+3=0$ o.e.	M1A1 [8]
		Total 8 marks

Mark	Notes
B1	For the correct sum of $\frac{5}{3}$ This may not be explicitly seen – look for it in their working
B1	For the correct product of $\frac{1}{3}$ This may not be explicitly seen – look for it in their working
B1 B1	For the correct value of $\alpha^2+\beta^2$ $\left[\frac{19}{9}\right]$ but does not need to be evaluated so accept $\left[\left(\frac{5}{3}\right)^2-2\times\frac{1}{3}\right]$ seen anywhere in their working. This can be embedded anywhere in their work This can also be implied from a correct value of the SUM $\frac{\alpha}{2\beta}+\frac{\beta}{2\alpha}=\frac{19}{6}$
B1	For the correct PRODUCT of $\frac{1}{4}$
M1	For the correct algebra $\left[\frac{2\alpha^2+2\beta^2}{4\alpha\beta}\right]$ **and** substitution of their values of $\alpha^2+\beta^2$ [even if the algebra on $\alpha^2+\beta^2$ is incorrect] to find the SUM. Ft their $\frac{19}{9}$ even if it comes from incorrect algebra on $\alpha^2+\beta^2$ earlier.
A1	For the value of $\frac{19}{6}$
M1	For a correct equation in any form. Need not = 0 for this mark
A1	For a correct equation with integer coefficients = 0