Question	Scheme	Marks	AOs
5(a)	Moments about B	M1	3.3
	$W \times \frac{2a}{3} = Ta\sin\alpha$	A1	1.1b
	$T = \frac{5}{6}W$ *	A1*	2.2a
		(3)	
5(b)	Moments about A $\left(aS\sin\beta = \frac{1}{3}aW\right)$ OR Moments about G $\left(\frac{2}{3}aS\sin\beta = \frac{1}{3}aT\sin\alpha\right)$ OR Resolve vertically $(T\sin\alpha + S\sin\beta = W)$	M1	3.4
	$S\sin\beta = \frac{1}{3}W$ *	A1*	2.2a
		(2)	
5(c)	Resolve horizontally	M1	3.3
	$S\cos\beta = T\cos\alpha$	A1	1.1b
	$S\cos\beta = \frac{1}{2}W$	A1	1.1b
	$S = \sqrt{\left(\frac{1}{2}W\right)^2 + \left(\frac{1}{3}W\right)^2}$	M1	2.1
	$S = \frac{\sqrt{13}}{6}W$ oe, $0.6W$ or better	A1	1.1b
		(5)	
			(10 marks)

Notes:

5a	M1	Correct no. of terms, dimensionally correct, condone sin/cos confusion and sign errors
	A1	Correct equation
	A1*	Given answer correctly obtained
5b	M1	Correct no. of terms, dimensionally correct, condone sin/cos confusion
	A1*	Given answer correctly obtained
5c	M1	Correct no. of terms, dimensionally correct, condone sin/cos confusion and sign errors
	A1	Correct equation

	A1	Correct equation in S, W and β only
	M1	Complete method to find S in terms of W only e.g. Divide to obtain $\tan\beta = \frac{2}{3}$ and use it to find S
	A1	cao