Question	Scheme	Marks	AOs
4(a)	Moments about A	M1	2.1
	$F \times 2a \sin 30^o = mga + 2mg \times 1.5a$	A1	1.1b
	$F = 4mg*$	A1*	2.2a
		(3)	
4(b)	Resolve vertically: $V = mg + 2mg - 4mg \sin 30^o$ **OR**, Moments about B: $V \times 2a = mga + 2mg \times 0.5a$	M1	3.4
	$V = mg$	A1	1.1b
		(2)	
4(c)	Resolve horizontally:	M1	3.3
	$H = 4mg \cos 30^o$	A1	1.1b
	Use of $\tan \theta = \dfrac{V}{H}$	M1	2.1
	$\tan \theta = \dfrac{1}{2\sqrt{3}}$ or $\dfrac{\sqrt{3}}{6}$	A1	1.1b
		(4)	
		(9 marks)	

Notes: N.B. In parts a and b, the M1 is for a complete method

4a	M1	Dimensionally correct, correct no. of terms and allow sin/cos confusion and sign errors.
	A1	Correct unsimplified equation.
	A1*	Given answer correctly obtained.
4b	M1	Correct no. of terms and allow sin/cos confusion and sign errors.
	A1	cao
4c	M1	Correct no. of terms and allow sin/cos confusion and sign errors.
	A1	Correct unsimplified equation.
	M1	Allow RHS inverted.
	A1	cao