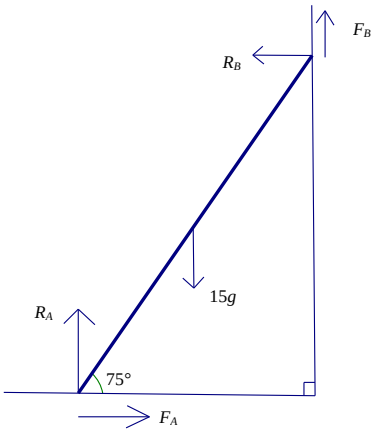
Question	Scheme	Marks	Notes
5a			
	Moments about A:	M1	Dimensionally correct. Include all relevant terms. Condone sign error(s) and sin/cos confusion.
	$15g \times 3\cos 75°$ $= F_B \times 6\cos 75° + R_B \times 6\sin 75°$	A1 A1	Unsimplified equation with at most one error Correct unsimplified equation
	$15g \times 3\cos 75°$ $= R_B \times 1.2\cos 75° + R_B \times 6\sin 75°$	M1	Use of $F_B = 0.2R_B$ in their attempt at the moments equation. Seen in part (a), not just on the diagram.
	$R_B = 19$(N) or $R_B = 18.7$(N)	A1	2 sf or 3 sf Ignore if go on to find the total force at A
		(5)	
5b	They need to form 2 equations. Mark them in the order seen. M1A1 for each correct equation		
	Resolve horizontally:	M1	First equation. Include all relevant terms. Dimensionally correct. Condone sign error(s) and sin/cos confusion
	$F_A = R_B \left(= 18.6925.....\right)$	A1	Correct unsimplified equation
	Resolve vertically:	M1	Second equation. Include all relevant terms. Dimensionally correct. Condone sign error(s) and sin/cos confusion
	$R_A + F_B = 15g \quad \left(R_A = 143.26...\right)$	A1	Correct unsimplified equation
	M1A1 for alternatives e.g. moments about B		$15g \times 3\cos 75°$ $= R_A \times 6\cos 75° - F_A \times 6\sin 75°$
	Use $F_A = \mu R_A$ to solve for μ	D M1	Dependent on the 2 preceding M marks
	$\mu = 0.13$ or better	A1	g cancels (0.1304784…)
		(6)	