

Question Number	Scheme	Marks
5(a)	<p style="text-align: center;">2.2 m</p> <p style="text-align: center;">T_1</p> <p style="text-align: center;">A</p> <p style="text-align: center;">G</p> <p style="text-align: center;">B</p> <p style="text-align: center;">40 N</p> <p style="text-align: center;">120 N</p>	
(i)	$M(B), \quad 4T_1 = 120 \times 1.8 + 40(4-x)$ $T_1 = 94 - 10x$	M1 A1 A1
(ii)	$M(A), \quad 4T_2 = 120 \times 2.2 + 40x$ $T_2 = 66 + 10x$	M1 A1 A1 (6)
(b)	$94 - 10x \leq 84$ $x \geq 1$ $66 + 10x \leq 84$ $x \leq 1.8$ $1 \leq x \leq 1.8$	M1 M1 A1 both CV A1 (4)
		10
	Notes	
5(a)(i)	First M1 for a complete method to find an equation in T_A and x only. First A1 for a correct equation in T_A and x only. Second A1 for $94 - 10x$	
(ii)	Second M1 for a complete method to find an equation in T_B and x only. First A1 for a correct equation in T_B and x only. Second A1 for $66 + 10x$	
5(b)	First M1 for their $T_A \leq 84$ or $= 84$ or < 84 to give equation or inequality in x only. (> 84 is M0) Second M1 for their $T_B \leq 84$ or $= 84$ or < 84 to give equation or inequality in x only. (> 84 is M0) First A1 for both critical values of x , 1 and 1.8 SEEN. Second A1 $1 \leq x \leq 1.8$ or $1 \leq x$ AND $x \leq 1.8$ or $[1, 1.8]$	