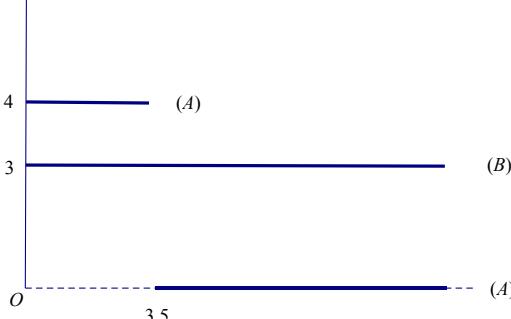
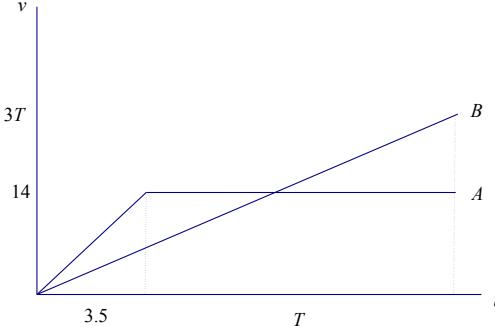


Question	Scheme	Marks
6(e)	 <p>(A) Condone missing 4  (B) Condone graph going beyond <math>T = 7</math>  Must go beyond 3.5. Condone no 3.</p> <p>(A) Condone graph going beyond <math>T = 7</math>  Must go beyond 3.5. B0 if see a solid vertical line.  Sometimes very difficult to see.  If you think it is there, give the mark.</p>	B1 B1 B1
		(3)
	Condone separate diagrams.	
	<b>Alternative for (c)</b> for candidates with a sketch like this:	Treat as a special case.
		B1B1B0 on the graph and then max 5/8 for (c) if they do not solve for the $T$ in the question.
	$\frac{1}{2} \times 3 \times (T + 3.5)^2 = \frac{1}{2} \times 4 \times 3.5^2 + 14T$	Use diagram to find area
		A1
		A1
	$12T^2 - 28T - 49 = 0$	Simplify to a 3 term quadratic in $T$
		A1
	$(2T - 7)(6T + 7) = 0$	Complete method to solve for the $T$ in the question
	$T = \frac{7}{2}$ or $-\frac{7}{6}$	Correct solution(s) - can be implied if only ever see Total = 7
	Total time = 7	A1
		(8)
		(17 marks)