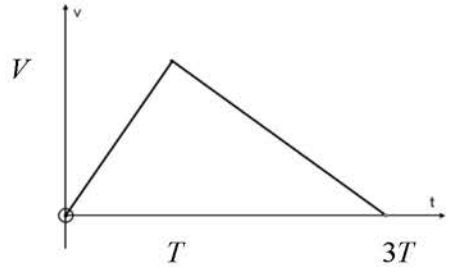
Question			Answer	Marks	AOs	Guidance	
9	(a)			**B1** **B1** **[2]**	**1.1a** **1.1a**	Two line segments starting and ending on the x-axis T and $3T$ seen on t-axis	Instead of $3T$, allow for $2T$ shown on the horizontal axis for the second phase
9	(b)		Acceleration phase $\frac{V}{T} = 2.5$ Area under graph $\frac{1}{2} \times V \times 3T = 240$ Solving simultaneously $\frac{3}{2}(2.5T)T = 240 \Rightarrow T^2 = 64$ So $T = 8$ and $V = 20$	**B1** **B1** **M1** **A1** **[4]**	**3.4** **3.4** **1.1a** **1.1**	soi May be sum of two areas soi Attempt to eliminate one variable correct pair of answers	$\frac{1}{2}VT + VT = 240$
			OR Acceleration phase using $v = u + at$ $V = 2.5 \times T$ First phase has distance $240 \div 3 = 80$ m Using $s = 80, u = 0, a = 2.5$ $80 = \frac{1}{2} \times 2.5T^2$ giving $T = 8$ and $V = 20$	 **B1** **M1** **B1** **A1**	 May be final step using $T = 8$ award if seen Using *suvat* equation(s) leading to a value for t with $s = 80$ correct pair of answers		