Question			Answer	Marks	AO	Guidance	
10	(a)		Value of $\frac{\mathrm{d}v}{\mathrm{d}t}$ at $t = 4$ is -11	**B1**	**3.4**	**BC**	
			Deceleration of P is $11\ \mathrm{m\,s^{-2}}$	**B1**	**2.5**	Correct positive value, with units	
			Alternative solution				
			$\frac{\mathrm{d}v}{\mathrm{d}t} = 5 - 4t$ evaluated at $t = 4$	**M1**			
			Deceleration of P is $11\ \mathrm{m\,s^{-2}}$	**A1**		Correct positive value, with units	
				[2]			
10	(b)		$t = 3$s	**B1**	**3.4**	-½, if present, must be rejected	
				[1]			
10	(c)		$\int_0^3 (2t+1)(3-t)\,\mathrm{d}t = \frac{27}{2}$	**B1**	**3.1b**	**BC**	
			$\int_3^4 (2t+1)(3-t)\,\mathrm{d}t = -\frac{25}{6}$	**B1**	**1.1**	**BC**	
			Total distance is $\frac{27}{2} + \frac{25}{6} = \frac{53}{3}$ m or 17.7 m	**B1**	**1.1**	Correct answer (exact, or at least 3sf)	If no marks, then award **SC B1** for either correctly integrating v or for an answer of 28/3 or 9.33 (at least 3 sf)
				[3]			