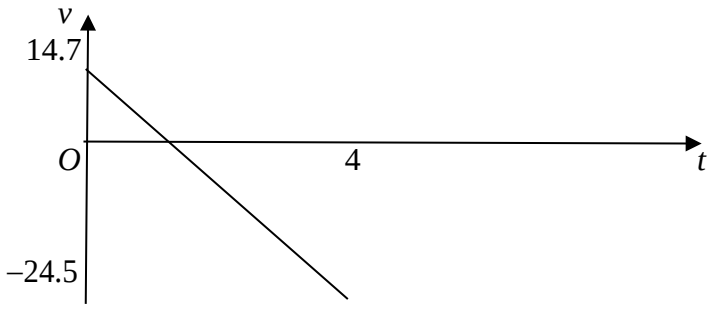
Question Number	Scheme	Marks
2(a)	Complete method to find the total time: e.g. $-19.6 = 14.7t + \frac{1}{2}(-9.8)t^2$ using one equation **OR:** $0 = 14.7 - 9.8t_1 \Rightarrow t_1 = 1.5$ $s_1 = 14.7 \times 1.5 - \frac{1}{2} \times 9.8 \times 1.5^2 = 11.025$ using four equations $30.625 = \frac{1}{2} \times 9.8 \times t_2^{\ 2} \Rightarrow t_2 = 2.5$ $t = t_1 + t_2 = 4$ (s) and many other methods	M1
	There are two A marks for all the equations they use, -1 each error	A1
		M(A)1
	$t = 4$ (s) only	A1
		(4)
(b)	$v^2 = 14.7^2 + 2(-9.8)(-19.6)$ **OR** $v = 14.7 + (-9.8) \times 4$	M1 A1
	Speed = 24.5 or 25 (m s^{-1})	A1
		(3)
(c)	e.g $0^2 = 14.7^2 + 2(-9.8)s$ or $24.5^2 = 2 \times 9.8s$	M1
	$s = 11.025$ (11 or better) $s = 30.625$	A1
	Total distance = $2 \times 11.025 + 19.6$ Total distance = 2 x 30.625 – 19.6	M1
	= 41.7 (3 sf) or 42 (2 sf) (m)	A1
		(4)
(d)		B1 line B1 start pt (0,14.7) **OR** on axes B1**ft** end pt (4,-24.5) **OR** on axes
		(3)
		(14)