Question Number	Answer		Mark
2 (a)	Measure the length of tube x using a (metre) rule	(1)	
	Ensure the tube is vertical with a set square		
	Or		
	Release the magnet from the top of the tube	(1)	
	Measure t using a stopwatch [Accept alternative valid timing methods]	(1)	
	Repeat measurement of time and calculate a mean	(1)	
	Repeat for at least 5 values of x	(1)	
	Plot a graph of t^2 against x to check the gradient (which is $\frac{1}{2}a$) is constant		
	Or		
	Plot a graph of t^2 against x to check it is a straight line	(1)	**6**
	Accept alternative graphs. Do not accept gradient = g		
2 (b)	Any **PAIR** from:		
	If the magnet is not aligned with the top of the tube when released	(1)	
	So the magnet would have a velocity when entering the tube	(1)	
	Or		
	It would be difficult to judge when the magnet is about to leave the tube	(1)	
	So this would add to the time	(1)	
	Or		
	The magnet could touch the sides of the tube and experience friction	(1)	
	So the time would increase	(1)	
	Or		
	The length of the tube may vary around the circumference	(1)	
	So this may introduce random error	(1)	**2**
	Total for question		**8**