

Question	Scheme	Marks	AOs
2(a)	$[P(T = 0) =] (1 - p)^2$ oe	B1	1.1b
		(1)	
(b)	e.g. if $P(T = 2) = \frac{1}{3} \Rightarrow p = \frac{1}{\sqrt{3}}$	M1	1.1b
	and $P(T = 0) = \frac{1}{3} \Rightarrow p = 1 - \frac{1}{\sqrt{3}}$ or $P(T = 1) = \frac{1}{3} \Rightarrow p = \frac{3 \pm \sqrt{3}}{6}$	M1	1.1b
	No consistent solution hence discrete uniform distribution not appropriate as model for T	A1	2.4
		(3)	
(4 marks)			
Notes:			
(a)	B1: any correct form		
(b)	M1: for use of probability of $\frac{1}{3}$ from discrete uniform distribution to deduce a value for p		
	M1: for use of a second probability $P(T = t)$ to deduce a value for p e.g. $p^2 = (1 - p)^2 \Rightarrow p = \frac{1}{2}$		
	A1: for equivalent conclusion following correct working		