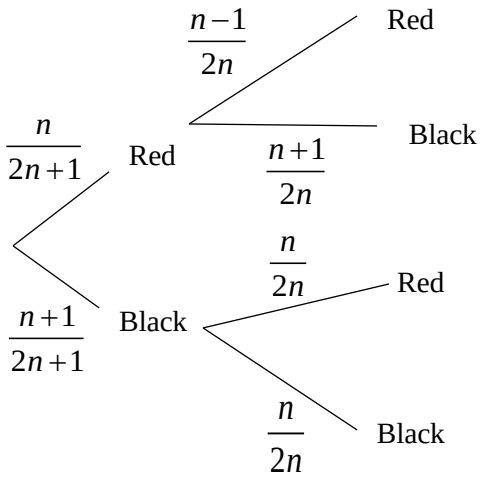
Question Number	Scheme		Marks
7 (a)		$\frac{n}{2n+1}$ and $\frac{n+1}{2n+1}$ in the correct places on the tree diagram	B1
		$\frac{n-1}{2n}$ and $\frac{n+1}{2n}$ in the correct places on the tree diagram	B1
		$\frac{n}{2n}$ and $\frac{n}{2n}$ in the correct places on the tree diagram	B1
			(3)
(b)	$'\frac{n}{2n+1}'\times'\frac{n+1}{2n}'+'\frac{n+1}{2n+1}'\times'\frac{n}{2n}'$		M1
	$=\frac{2n(n+1)}{2n(2n+1)}=\frac{n+1}{2n+1}$*		A1*
			(2)
(c)	$\frac{n+1}{2n+1}=\frac{25}{49}\Rightarrow n=24$ So 49 counters in the box		M1 A1
			(2)
(d)	$\frac{'\frac{25}{49}'\times'\frac{24}{48}'}{\frac{25}{49}}=\frac{1}{2}$		M1 A1
			(2)
	Notes		**Total 9**
(a)	**B1**	For $\frac{n}{2n+1}$ and $\frac{n+1}{2n+1}$ in the correct places on the tree diagram	
	B1	For $\frac{n-1}{2n}$ and $\frac{n+1}{2n}$ in the correct places on the tree diagram	
	B1	For $\frac{n}{2n}$ and $\frac{n}{2n}$ in the correct places on the tree diagram. Allow $\frac{1}{2}$ for $\frac{n}{2n}$ in both places	
(b)	**M1**	For use of P(Red) × P(Black) + P(Black) × P(Red) ft their tree diagram	
	A1*	Answer is given so no incorrect working can be seen. Must have at least one correct line of working between M1 and the given answer.	
(c)	**M1**	For solving to find $n = 24$	
	A1	Cao	
(d)	**M1**	For a correct ratio ft their n and their tree diagram Allow a correct ratio in terms of n e.g. $\frac{\frac{n+1}{2n+1}\times\frac{n}{2n}}{\frac{n+1}{2n+1}}$ oe ft their tree diagram for the numerator	
	A1	For 0.5 (Working must be seen)	