

⑥ Monty Hall

Suppose we pick Door 1

Car Location	Monty opens	Total Prob	Stay	Switch
Door 1	$\frac{1}{2}$ Door 2 $\frac{1}{2}$ Door 3	$\frac{1}{6}$ $\frac{1}{6}$	Car Car	Goat Goat
Door 2	Door 3	$\frac{1}{3}$	Goat	Car
Door 3	Door 2	$\frac{1}{3}$	Goat	Car

Switching has a $\frac{2}{3}$ prob. of getting car.