

ASSUME THAT j IS TRANSIENT
THERE IS A POSITIVE PROB $1 - f_j$ OF NEVER
REVISITING j .

PROB OF EXACTLY ONE VISIT : $f_j(1 - f_j)$
TWO VISITS : $f_j^2(1 - f_j)$
AND

THE NUMBER OF VISITS WILL HAVE A GEOMETRIC DISTRIBUTION
EXPECTED NUMBER OF VISITS : $\frac{1}{1 - f_j}$

$$\sum_{n=0}^{\infty} P_j^n = \frac{1}{1 - f_j} < \infty$$