

Week 26 (3/10/03)

**Drunken walk**

A drunk performs a random walk along a street. At one end of the street is a river, and at the other end is a police station. If he gets to either of these ends, he remains there. He starts  $n$  steps from the river, and there are  $N$  total steps between the river and the police station.

- (a) What is the probability that he ends up at the river? At the police station?
- (b) What is the expected total number of steps he takes?