

MA 587/687

Name (Print last name first):

Quiz I

Question 1

Hilary Clinton and Ted Kennedy flip a coin that comes up heads with probability p . Each time a head comes up Hilary gets a point, and each time a tails comes up Ted gets a point. If they play until someone has 2 more points than the other, what is the probability they play a total of $2n$ flips? What is the probability that Hilary wins?

Question 2

Urn A has 4 red balls and 6 blue balls, and Urn B has 11 red balls and 4 blue balls. If we flip a fair coin and it comes up heads then we pick from Urn A, otherwise we pick from Urn B. Suppose we flip a coin and then pick a ball. If the ball was red, what is the probability the coin was a heads?