Group_____ Names_____

Group Quiz for Section 4.2

1. Suppose you start in the center of the quad and flip a fair coin; you take one step south if it lands on heads and one step north if it lands on tails. Then you do it again, and again, and again. Let X_n be your distance (in number of steps) from the center of the quad after n coin flips.

   (a) What is $\mathbb{E}X_n$?

   (b) Find $\lim_{n\to\infty} \mathbb{P}\left[X_n > \frac{n}{2}\right]$.