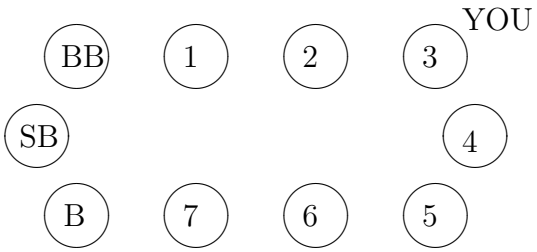
Honors 201: Mathematics and Texas Hold'em

Problem Set 1 Due Tuesday February 5



In my diagrams, SB=small blind, BB=big blind, B=button (i.e. dealer)

You are playing no limit hold'em with \$1-\$2 blinds. You currently have \$200.

You are dealt K♡Q♡.

Preflop

Player 1 calls. Player 2 folds. You raise to \$10 you are called by Player 7 and Player 1. The pot now contains \$32.

The Flop K♢Q♢3♢

Player 1 bets \$25. You raise to \$60. Player 7, who has more money than you raises all-in. Player 2 folds. It will cost you your remaining \$130 to call.

Assume that Player 7 has made a flush and that in order to win you will need to either make a full house or four K or Q.

1) What is the probability that you will win the hand? Explain your reasoning.

2) Should you call? Why?

3)[1] Is the assumption that Player 7 has a flush reasonable? How might this effect your decision?

[1]This question is optional. It is a poker strategy question rather than a strictly mathematical question