Math 4740 - Homework # 7
The normal approximation to binomial random variables

1. Suppose you roll a 6-sided die 100 times.

   (a) <u>Estimate</u> the probability a four will occur between 0 and 15 times.

   (b) <u>Estimate</u> the probability that a four occurs exactly 15 times.

2. Suppose you roll a 4-sided die 50 times. <u>Estimate</u> the probability that a three will occur between 10 and 15 times.

3. Suppose you play the game of Roulette 50 times. Each time you play you bet on black. <u>Estimate</u> the probability that you will win between 26 and 50 times (that is, more than half of the bets).