

1. You roll a pair of fair dice. What is the chance that,
 - (a) you get a sum of 5?

 - (b) you get a 2 or 3 on at least one of the dice?

2. Suppose you roll an honest die 8 times in a row.
 - (a) What is the chance of never getting a 6?

 - (b) What is the chance of getting *exactly* two 6's?

3. The American Roulette wheel has 38 sectors, 18 of which are Red. Compute the expected value on a \$5 bet on Red in American roulette. This bet pays even money.