

1. Deal two cards from a well shuffled deck.
 - a) What is the probability the first is a king or the second is a queen?
 - b) What is the probability both are kings?
 - c) What is the probability at least one of them is a king?
2. Roll a pair of dice. What is the probability you got doubles given that the sum is 4?
3. An urn contains 7 red balls and 9 green ones. Draw six times with replacement. What is the probability you get more green balls than red ones?
4. The probability of winning roulette is $\frac{1}{38}$. Play roulette 50 times. What is the probability you win at least twice?
5. A true-false test has 25 questions. A correct answer is worth 2 points. If you answer incorrectly, you lose a point. The passing score is 25. What is the probability you pass by guessing?
6. GAME: Draw twice with replacement from the following box:

1	2	3	4	5	6	7	8
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If the sum is 4, you win \$19. Otherwise you lose \$1.

Suppose you play the game 400 times. The next three questions concern your net gain/loss.

- a) What is the probability you lose at least \$20?
- b) What is the probability you lose at least \$100?
- c) What is the probability you win at least \$100?