Name: _____

Independent Events

Exercise 1: Draw two cards from an ordinary deck. What is the probability of getting both the king and queen of hearts?

Exercise 2: Draw five cards. What is the probability of drawing the 1, K, Q, J, 10 of Hearts? What is the probability of drawing a face card?

Exercise 3: Two basketball teams of equal skills are involved in a four-game tournament. What is the probability of one of the teams winning the tournament in four straight games?

Exercise 4: Two dice (one red, one green) are cast, and the upper numbers are observed. Test for independence:
1) The red die is even; the green die is odd
2) The red die is a 1; the sum is even
3) Neither die is 1; the sum is even
4) Both dice are 1; the sum is even
5) Neither die is 1; both show the same number

Exercise 5: A box contains three black pieces of cloth, two striped pieces, and four dotted pieces. A piece is selected randomly and then placed back in the box. A second piece is selected randomly. What is the probability that:
1) Both pieces are dotted?
2) The first piece is black and the second piece is dotted?
3) One piece is black and one piece is striped?

Exercise 6: The National Lottery has 49 balls of which you choose 6. In the draw 6 main balls are chosen and a seventh bonus ball. Given that all 49 balls are equally likely to be drawn, what is the probability of winning the jackpot? Also find the probability of choosing 5 balls, plus the bonus ball.