Name: _____

Independent Events

Exercise 1: Suppose a bag contains 6 oatmeal cookies, 4 raisin cookies, and 5 chocolate chips. You are drawing two cookies from the bag without looking (and without replacement). What is the probability that you will get two chocolate chip cookies?

Exercise 2: The bag contains 6 oatmeal cookies, 4 raisin cookies, and 5 chocolate chips. You are drawing two cookies from the bag without looking (and without replacement). What is the probability that you will get one oatmeal and one raisin cookie?

Exercise 3: If two cards are drawn from a deck of cards, with replacement, find the probability that the first card is a heart and the second card is an ace.

Exercise 4: A single die is rolled twice. Find the probability that
1) A six is rolled the 1st time and an odd number is rolled a 2nd time.
2) A number less than or equal to 2 is rolled the 1st time and an even number is rolled the 2nd time.

Exercise 5: A teacher keeps a jar full of different flavored jelly beans on her desk and hands them out randomly to her class. But one particularly picky student likes only the strawberry-flavored ones. If the jar has 50 beans in all; 15 strawberries, 10 cherry, 20 watermelons, and 5 blueberries. What is the probability that the first three jelly beans picked out are strawberry-flavored?

Exercise 6: Suppose events A, B, and C are independent. If $P(A \cap B) = 0.5$ and $P(A \cap B \cap C) = 0.25$ .What is $P(C)$?