Conditional Probability Remediation Practice   Name_____

1. A large container is holding economics and a math books. Two books are chosen at random without replacement. The probability of selecting an economics book on the first draw is 0.62. The probability of selecting an economics book and then a math book is 0.42. What is probability selecting a math book on the second draw, given that the first book was economics?

2. In bag are chocolate chip cookies and Oreos. Two items are chosen at random from the bag, without replacement. The probability of selecting a chocolate chips cookie and then an Oreo is 0.47. The probability of selecting a chocolate chip cookie on the first draw is 0.71. What is probability selecting an Oreo on the second draw given that the first cookie drawn was a chocolate chip?

3. In certain population, the probability that a man lives for at least seventy five years is 0.75. The probability that he will live for at least eighty-five years is 0.65. If a man is seventy-five years old, what is the conditional probability he will survive to eighty-five years?

4. In a school, the probability that a student takes environmental science and geography is 0.25. The probability that a student takes environmental science is 0.72. What is probability that a student takes geography given that the student is taking environmental science?

5. A jar contains black and white marbles. Two marbles are chosen without replacement. The probability of selecting a black marble and then a white marble is 0.34, and the probability of selecting a black marble on the first draw is 0.47. What is the probability of selecting a white marble on the second draw, given that the first marble drawn was black?

6. At a middle school, 0.18 of all students play football and basketball and 0.32 of all students play football. What is the probability that a student plays basketball given that the student plays football?

7. Tiffany has an obsession with pop figures. She currently has 6 disney, 7 marvel, 2 monster high, 10 key chains, 3 hero, and even 2 coffee mugs. She plans to show here collection to her youtube channel. Find the following probabilities.

   a. Tiffany with select a Disney figure and then a marvel with replacement? (percent)

   b. Tiffany will select a coffee mug and a hero without replacement? (reduced fraction)

   c. Tiffany will select a Key chain or a monster high character? (decimal)

   d. Tiffany will select a Disney, monster high, or marvel character? (percent)

8. Bill has a small collection of 55 postcards. He currently has 7 postcards from the Russia, 15 postcards from France, 11 postcards from the United Kingdom, and 22 from the United States. He currently has them all in a box and unorganized.

   a. Bill reaches into the box, what is the probability that he would select a postcard from the United States or from Russia?

   b. What is the probability that Bill chooses a United Kingdom postcard and then France post card without replacement?

   c. What is the probability of Bill choosing in one drawing, a postcard from France or a postcard from a European country?

   d. What is the probability of choosing a postcard from the Russia, putting it back, and then choosing one from the United Kingdom?