Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ December 17, 2014

Using Probability to Make Qualitative Predictions

1. Herschel pulls a sock out of his drawer without looking and puts it on. The sock is black. There are 7 black socks, 8 white socks, and 5 striped socks left in the drawer. He pulls out a second sock without looking. Is it likely that he will be wearing matching socks to school?
2. All 2,000 customers at a gym are randomly assigned a 3-digit security code that they use to access their online accounts. The codes are made up of the digits 0 through 4, and the digits can be repeated. Is it likely that fewer than 10 of the customers are issued the code 103?
3. A bag of marbles contains 8 red marbles, 4 blue marbles, and 5 white marbles. Tom picks a marble at random. Is it more likely that he picks a red marble or a marble of another color?
4. 4. At a fundraiser, a school group charges $6 for tickets for a “grab bag.” You choose one bill at random from a bag that contains 40 $1 bills, 20 $5 bills, 5 $10 bills, 5 $20 bills, and 1 $100 bill. Is it likely that you will win enough to pay for your ticket? Justify your answer.
5. In Mr. Jawarani’s first period math class, there are 9 students with hazel eyes, 10 students with brown eyes, 7 students with blue eyes, and 2students with green eyes. Mr. Jawarani picks a student at random. Which color eyes is the student most likely to have?
6. Dawn draws 1 card, replaces it, and draws another card. Is it more likely that she draws 2 red cards or 2 face cards?
7. John and O’Neal are playing a board game in which they roll two number cubes. John needs to get a sum of 8 on the number cubes to win. O’Neal needs a sum of 11. If they take turns rolling the number cube, who is more likely to win?
8. Enrique rolls two dice. Is it more likely he’ll roll an even or an odd number?