

Table Number: _____

Group Name: _____

Group Members: _____

Modeling a Random Phenomenon Matching Chocolates

A bowl of chocolate candies has the following colors:



6 gold
8 blue
7 green
4 brown

What is the probability of getting two of the same color candies when randomly selecting two chocolate candies from the bowl?

Simulation:

1. Describe a simulation that could be used to answer this question.
2. Perform at least 30 trials of the simulation at your table. Record the results below. Let G = gold; B = blue; R = green; N = brown.
3. Interpret your results as you answer the question: what is the probability of getting two of the same color candies when randomly selecting two chocolate candies from the bowl?

Theoretical Probability:

4. Describe the sample space that would mean getting two candies of the same color. Write all possible outcomes below.
5. Draw a probability tree diagram for the scenario on the back of this sheet.
6. Use the sample space and tree diagram to answer the question: what is the (theoretical) probability of getting two of the same color candies when randomly selecting two chocolate candies?

Compare your answers for parts (c) and (f).