**Chocolate Probability**

**Activity One**

1. Theoretical Probability:
2. Experimental Probability:
3. What is the theoretical probability that you will pick a:
   * Regular chocolate-
   * Dark chocolate-
   * Krackel-
   * Mr. Goodbar-
4. Now, 25 times pick one piece of candy at a time out of the bag and record your results:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Candy | Individual Tally | Experimental  Probability | Class Tally | Experimental Probability |
| Regular chocolate |  |  |  |  |
| Dark chocolate |  |  |  |  |
| Krackel |  |  |  |  |
| Mr. Goodbar |  |  |  |  |

1. Simple event:
2. Compound event:

**Activity Two**

1. Independent event:
2. Dependent event:
3. What is the probability of picking chocolates two times (with replacement) and each time getting a:
   * Regular chocolate-
   * Dark chocolate-
   * Krackel-
   * Mr. Goodbar-
4. What is the probability of picking chocolates three times, eating the candy you get, and each time getting a:
   * Regular chocolate-
   * Dark chocolate-
   * Krackel-
   * Mr. Goodbar-

**Activity Three**:

1. Permutation:
2. Combination:
3. How many ways can you pick:
   * Two pieces of candy:
   * Three pieces of candy:
   * Four pieces of candy:
4. How many ways can you order:
   * Two pieces of candy:
   * Three pieces of candy:
   * Four pieces of candy:

**Activity Four:**

1. If you had 1,000 pieces of candy, how many of each chocolate would you expect to get:



* + Regular chocolate-
  + Dark chocolate-
  + Krackel-
  + Mr. Goodbar-