A Roll of the Dice Group Number: \_\_\_\_\_\_\_\_\_ Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** | **6** |
| **1** | 2 | 3 | 4 | 5 | 6 | 7 |
| **2** |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |

* 1. The table to the right represents the sum of two dice; the first row has been done for you. Complete the rest of the table.
  2. Now, to calculate the theoretical probability of rolling any given sum on the table you will need to know the total number of outcomes and the number of times a particular sum is rolled.
  3. Hopefully you can see that there are 36 possibilities (using the counting principle). So for example, there is only 1 way to roll a sum of 2. Therefore, the probability of rolling a sum of two is 1/36 or .028 to the nearest thousandth. Determine the rest of the probabilities and fill in the chart below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sum | Probability (in fractional form) | Probability (to the nearest thousandth) | Your group’s experimental probability (as a fraction) | Your group’s experimental probability (to the nearest thousandth ) |
| 2 | 1/36 | .028 |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |
| 7 |  |  |  |  |
| 8 |  |  |  |  |
| 9 |  |  |  |  |
| 10 |  |  |  |  |
| 11 |  |  |  |  |
| 12 |  |  |  |  |
| Check your result: |  |  |  |  |

* 1. How can you check your results? Do this in the bottom row.
  2. Now roll the dice 40 times and write down your results on the next page.
  3. Complete the chart with your results. For example, if you rolled a sum of 5 twice out of the 40 times you rolled, your experimental probability will be 2/40 or .05.

Please tally the sum each time you roll the die. You should roll the pair of dice 40 times.

|  |  |
| --- | --- |
| Sum | Tally |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |
| 11 |  |
| 12 |  |