**BEANO!!!!**

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

**Directions**

1. Take the 12 beans that have been given to you, and place them under the numbers listed above. You can place them all under one number, or spread them out however you like.
2. The dice-roller will roll a pair of dice, and then call out the sum of the two n umbers rolled. If you have a bean underneath the number he calls out, take it off the piece of paper and place it next to you on the desk.
3. The first person to remove all their beans wins! You have to shout Beano! if you win.

**Probability Worksheet**

Fill in the chart. Find sum of the number in the column + number in the row:

(A few boxes have been filled in for you as an example)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  | 7 |  |  |  |  |
| 6 |  |  |  |  |  | 12 |

Now make a bar chart of the sum (x-axis) vs. the frequency of each sum (y-axis):

**How many times does the sum occur in the previous chart?**

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

**Evaluation Questions**

1. Based on your graph, which outcome is most likely? What is the probability of rolling the dice and getting that sum?
2. During the actual game, which 3 outcomes appeared most often?
3. Describe the way your strategy changed over the course of the game:

4. After playing this game, what does probability mean to you? If you want to win, should you arrange your beans to match your graph?