

## Experiment Sheet

The experiment is to roll two dice and record the sum of the numbers shown. The possible events are  $\{2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$ . Make a frequency graph (bar graph) of the results of 50 rolls of the dice.

2	3	4	5	6	7	8	9	10	11	12	

What are the relative frequencies for each outcome based on your results?

2	3	4	5	6	7	8	9	10	11	12	

Determine the theoretical probabilities for the outcomes of this experiment, in the ideal setting. In other words, if on each die each number is equally likely to appear, what are the probabilities for each of the outcomes? Complete the table below for the thirty-six possible outcomes.

	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

Now compute the theoretical probabilities for each event:

2	3	4	5	6	7	8	9	10	11	12	

Based on your work above, determine the probabilities for each of the events listed below:

1. The probability of rolling an odd number is \_\_\_\_\_
2. The probability of rolling a 7 or an 11 is \_\_\_\_\_
3. The probability of not rolling a 7 or an 11 is \_\_\_\_\_
4. The probability of rolling a number greater than 7 is \_\_\_\_\_
5. The probability of rolling doubles is \_\_\_\_\_
6. The probability of rolling a 7 or doubles is \_\_\_\_\_