

Investigation 2 Check Up Topics

1. Understand the following terms. Be able to decide of a situation is:
 - a. Possible
 - b. Probable
 - c. Equally Likely
 - d. Not Equally Likely
2. Understand that the sum of the probability that an event will happen and the probability that an event will not happen is 1.
3. Understand that experimental probability is the ratio of favorable outcomes to total trials.
4. Understand that theoretical probability is the ratio of the number of ways an event can happen to the total amount of outcomes.
5. Understand that probability is expressed as a number 0 to 1:
 - a. If $P=0$, the event is impossible.
 - b. If $P=1$, the event will definitely happen.
 - c. If $0 < P < 1$ (probability is between 0 and 1), the event may or may not happen.
6. Calculate experimental and theoretical probability from a set of data.
7. Compare and contrast experimental and theoretical probabilities.

Investigation 2 Check Up Review

I rolled a fair 6-sided number cube and tossed a coin 12 times and recorded the results in the following table:

Trial #	1	2	3	4	5	6	7	8	9	10	11	12
Number	4	1	5	1	2	4	2	2	5	2	4	3
Coin	H	H	T	T	T	T	T	H	H	T	H	T

1. Are all outcomes **equally likely**? Explain.
2. Is it **possible** to roll 12 sixes in a row? Explain.
3. Is it **probable** to roll 12 sixes in a row? Explain.
4. What is the **experimental** probability of getting a 4 and heads?
5. What is the **theoretical** probability of getting a 4 and heads?

6. Compare your experimental and theoretical probabilities.

7. What could be done to make this a more accurate experiment?

8. What is the theoretical probability of **NOT** getting a 4 and heads?

9. What is the theoretical probability of rolling a 7?

10. What is the theoretical probability of rolling a number less than 7?

11. If the probability that an event will not occur is $\frac{4}{5}$, then the probability that an event will occur is _____ because the sum of the two probabilities is _____.