Read sheet Names: _____

1. What is an **experiment**?

2. What is an **outcome**?

3. What is a **sample space**?

   Experiment 1 Flip three coins and note Heads or Tails.

4. Write a complete sample space for this experiment.

5. What is an **event**?

6. In Experiment 1, give an example of a **simple event**, and an event that is not simple.

7. What is the probability of the **certain event**?

8. For Experiment 1, give an example of two events A, B that are mutually exclusive, and two events A, C that are not mutually exclusive.

9. For the sample space in Experiment 1, it makes sense to assume that the outcomes are equally likely. In that case, what probability would we assign to each outcome?

10. In Experiment 1, what is the probability that you get exactly 2 Heads?

   Experiment 2 Flip a coin until you get Heads, and count the number of tosses until the coin lands Heads for the first time.

11. Write a sample space for this experiment. How many elements would be in this sample space?

   Experiment 3 Flip a coin until you get Heads or until you have flipped 3 times (then stop).

12. Write a sample space for this experiment.

13. How many elements are in the sample space?

14. Do you think they are equally likely? If so, what would the probability of each outcome be? If not, what probability would you assign to each outcome?