7.1: Relative Frequency and Probability

How do you determine the likelihood of an event?	Events in the _____ • • •	Events in the _____ • • •

The term _____ should ONLY be used when referring to an event _____.

Relative Frequency

Consider the question: How likely is it that a fair coin is flipped and it lands on heads?

One Approach: Flip a coin many times and count how _____ it lands on "heads" _____ to the total number of times the coin was flipped.

Relative Frequency		RF = —————————————

- Frequency refers to the _____ an event occurs.

- Relative frequency is the ratio of the _____ to the _____.

Example) A fair coin is flipped ten times. The results are pictured below.

The frequency of tails is _____

The relative frequency for tails is _____

Let's say we were going to make a bet about what the next coin flip would be. Based on the results above, what do you think is most to happen in the next coin flip? Why?

Practice) Ms. Schenkel shot 10 free throws and the results are recorded below with a check meaning she made the free throw and an x meaning she missed the free throw.

The frequency of a made shot is _____
The relative frequency for a made shot is _____

Let's say we were going to make a bet about if Ms. Schenkel would make or miss the next free throw. Based on the results above, what do you think is most likely to happen in the next shot? Why?

Practice.

1. You roll a dice 30 times with the results below.

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

a) Complete the relative frequency table.

Number on dice	1	2	3	4	5	6
Relative frequency						

b) Do you think the dice is biased? Explain your answer.

c) If you decide to roll the dice 600 times. Calculate an estimate of the number of times that the dice would land on 4.