**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Probability in genetics plays a huge part in how traits are inherited and it is by random chance that we have the traits that we do.**

We will be able to predict of have a high “probability” before we start that you will have a combination of AA ¼ of the time Aa ½ of the time and aa ¼ of the time.

How many of each genotype combination are expected in the offspring of a cross of two parents that are Aa for a trait? **(6 pts)**

|  |  |
| --- | --- |
|  | Genotypes: \_\_\_\_/4 = AA \_\_\_\_/4 = Aa \_\_\_\_/4 = aa |

Cover both sides of two pennies with masking tape. Print a capital “A” on one side of EACH coin, and a lowercase “a” on the other side of EACH coin. **(10 pts)**

Place one coin in each hand. Shake, and then toss the coins onto your desk. Record on the lab sheet with a tally mark under the letter combination below. Toss the coins a total of 20 times.

# of AA combinations #of Aa combinations #of aa combinations

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_