Name: *Complete Lab in LabBook*
_____
Group: -Title, Purpose, Hypothesis
         -Data Table
         -Results
         -Ratios of Results
         -Questions

Genetics and Probability Lab

Much of genetics can be understood by knowing the probability of a situation.

You and another member of your group will each flip two coins and record the results. Ex: 2 heads, 1 head and 1 tail, or 2 tails.

Hypothesis →

Predict how many times you think the coins will be (out of 100 trials):

2 heads _____   1 head and 1 tail _____   2 tails _____

Now actually flip the two coins and record the results on the table below:

Data table →

Two Heads	One Head and One Tail	Two Tails

Results →

Totals from your 100 trials: (you + i)

2 heads _____   1 head and 1 tail _____   2 tails _____

Finish the coin toss activity then add your results to the second set of results from your group. When you are finished turn in your group totals to the instructor.

Totals from your group (200 trials total): (you + table)

2 heads _____   1 head and 1 tail _____   2 tails _____

Totals from your class: (All tables)

2 heads _____   1 head and 1 tail _____   2 tails _____

Ratios of your Results (2 Heads: 1 Head and 1 Tail: 2 Tails)
Yours: _____
Group:_____
Class: _____

Questions:

If the coin were to represent the parent plant each side of the coin represents a factor (trait). Lets say that Heads represents a tall gene and Tails represents a short gene.

1. What is genotype for each of the parent plants?

2. What type of plant is represented by 2 heads, a tall or a short plant?

3. What type of plant is represented by 2 tails, a tall or a short plant?

4. What type of plant is represented by 1 head and 1 tail, a tall or a short plant?

5. How many tall plants did your group produce from 200 coin tosses?

6. How many short plants did your group produce from 200 coin tosses?

7. What is the ratio of tall to short plants from your group?

8. What is the ratio of tall to short plants from your class?