Things you need to include in Population Genetics and Evolution Lab Report

Introduction – Must mention HWE, what has to happen, what it all means overall, Hypothesis (if/then

statement)

Procedure – List steps for **EACH** exercise/case in your own words

Data – This is where **ALL** tables, data, and calculations go

* Table 8.1 – Phenotypic Proportions of Tasters & Nontasters

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Phenotypes | | | | Allele Frequency | |
| Tasters (p2 + 2pq) | | Nontasters (q2) | | p | q |
| PTC  Class Population | # | % | # | % |  |  |
|  |  |  |  |
| North American Population | 0.55 | | 0.45 | |  |  |
| Thiourea  Class Population | # | % | # | % |  |  |
|  |  |  |  |
| Sodium Benzoate Class Population | # | % | # | % |  |  |
|  |  |  |  |

* Calculations for Table 8.1 (only one set is needed to provide an example)
  + Show PTC % of Tasters, % of Nontasters, p, & q calculations
* Show tables from Data Page for **EACH** Case (Example below)

CASE 1 – Hardy Weinberg Equilibrium

Initial Class Frequencies:

AA \_0.25\_ Aa \_0.5\_ aa \_0.25\_

My Initial Genotype: \_Aa\_

F1 Genotype \_\_\_\_\_

F2 Genotype \_\_\_\_\_

F3 Genotype \_\_\_\_\_

F4 Genotype \_\_\_\_\_

F5 Genotype \_\_\_\_\_

Class Totals:

|  |  |  |  |
| --- | --- | --- | --- |
|  | AA | Aa | aa |
| F5 Generation |  |  |  |

Final Class Frequencies:

AA \_\_\_\_\_ Aa \_\_\_\_\_ aa \_\_\_\_\_

p \_\_\_\_\_ q \_\_\_\_\_

* Calculations for Case 1
  + Frequency of AA or p2 = # of AA/Total Class
  + Frequency of Aa or 2pq = # of Aa/Total Class
  + Frequency of aa or q2 = # of aa/Total Class
  + p = Freq of AA + ½ (Freq of Aa)
  + q = Freq of aa + ½ (Freq of Aa)

Conclusion – Prove or disprove hypothesis, Errors, What the experiment proved or provided as far as

information is concerned