Name _____ Date _____ Per ___ Score _____

# Human Traits

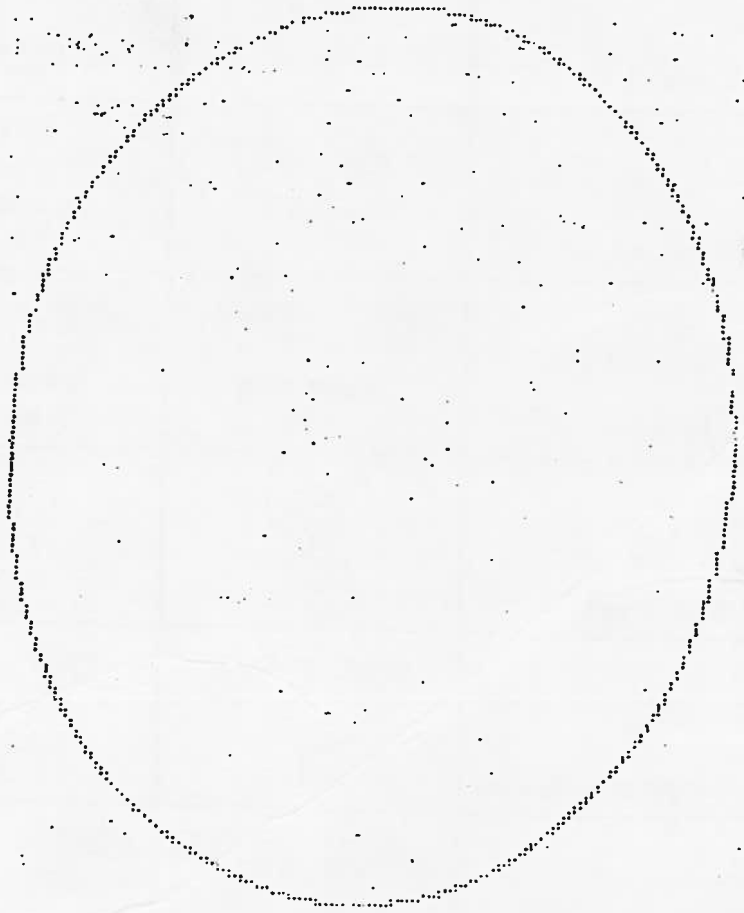
**Directions**: Flip one coin to determine the sex of your offspring. Heads = female, tails = male. and your partner will now each flip a coin to determine the genotype of your offspring for each of traits shown on the trait chart (Heads = dominant allele, tails = recessive allele). Record the genotypes in the spaces provided along the left side. Circle the genotypes that exhibit <u>incomplet dominance</u>. Three of the traits will be ones you make up on your own; draw them in on the trait chart. Draw the phenotype of your offspring in the space below. Use the dots as a guide for the appropriate size of your face phenotypes. Color your phenotype. Answer the questions and turn all pages of the lab.

PARTNER'S NAME: _____

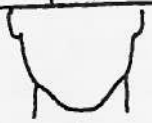
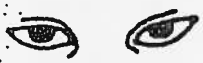
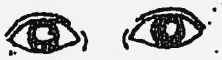
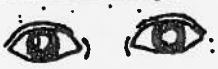
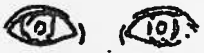
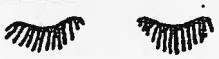
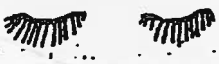
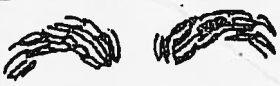
"GENOTYPE"

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

"PHENOTYPE"

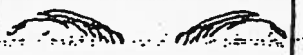
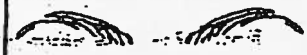
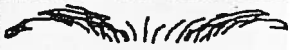
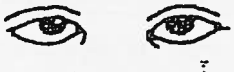
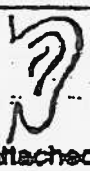
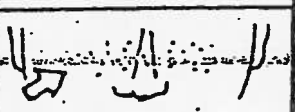
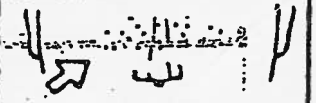


# Trait Chart

| Traits | Dominant (both heads) | Hybrid (one head, one tail) | Recessive (both tails) |
|---|---|---|---|
| 1. Shape of face |  round (RR) |  round (Rr) |  square (rr) |
| 2. Cleft in chin |  absent (CC) |  absent (Cc) |  present (cc) |
| 3. Hair |  curly (HH) |  wavy (Hh) |  straight (hh) |
| 4. Widow's peak |  present (WW) |  present (Ww) |  absent (ww) |
| 5. Shape of lips |  thick (TT) |  normal (Tt) |  thin (tt) |
| 6. Shape of eyes |  almond (AA) |  almond (Aa) |  round (aa) |
| 7. Eye color |  brown eyes (BB) |  brown eyes (Bb) |  blue eyes (bb) |
| 8. Size of ears |  large (LL) |  normal (Ll) |  small (ll) |
| 9. Length of eyelashes |  long (LL) |  long (Ll) |  short (ll) |
| 10. Shape of eyebrows |  bushy (BB) |  bushy (Bb) |  fine (bb) |

Name _____ Date _____ Per ___ Score ___

## Trait Chart

| Traits | Dominant (both heads) | Hybrid (one head, one tail) | Recessive (both tails) |
|---|---|---|---|
| 11. Position of eyebrows |  not connected (NN) |  not connected (Nn) |  connected (nn) |
| 12. Size of nose |  large (LL) |  medium (Ll) |  small (ll) |
| 13. Size of eyes |  large (LL) |  medium (Ll) |  small (ll) |
| 14. Earlobes |  unattached (AA) |  unattached (Aa) |  attached (aa) |
| 15. Size of mouth |  large (LL) |  medium (Ll) |  small (ll) |
| 16. Freckles |  present (FF) |  present (Ff) |  absent (ff) |
| 17. Dimples |  present (DD) |  present (Dd) |  absent (dd) |
| 18. | | | |
| 19. | | | |
| | | | |

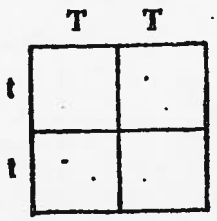
Complete the squares for crosses between pea plants. Then answer the questions.

1. When pure tall and pure short peas are crossed, what percentage of the offspring are tall? _____

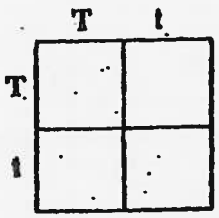
2. When two hybrid talls are crossed, what percentage of the offspring are pure tall? _____ What percentage are hybrid tall? _____ What percentage are pure short? _____

3. When two hybrid talls are crossed, what percentage of the offspring are tall? _____

4. What is the ratio of tall to short in the cross between hybrids? _____



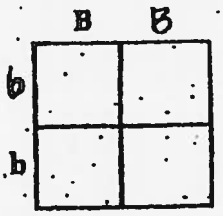

cross between pure tall and pure short pea plants




cross between hybrid tall pea plants

C. Complete the squares for crosses between persons with brown and blue eyes. Then answer the questions.

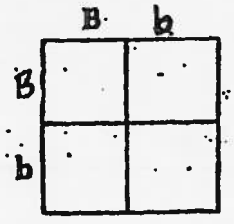
1. When one parent has two genes for brown eyes and the other has two genes for blue eyes, what color are the childrens' eyes? _____




B = brown

b = blue

2. When both parents are hybrid for brown eyes, what is the chance that a child will have blue eyes? _____

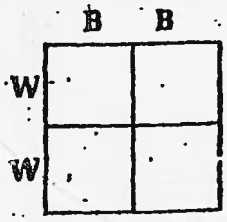



D. Complete the square for crosses between black, white, and gray chickens.

1. All the offspring of a cross between a black and a white chicken will be what color? _____

2. When two gray chickens are mated, what percentage of the offspring are expected to be black? _____

What percentage gray? _____

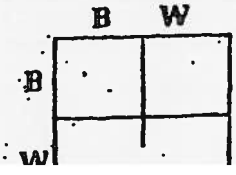



B = black

W = white

BW = gray

cross between black and white chickens




cross between gray chickens