

... for your shopping in observations.













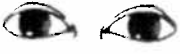


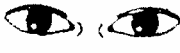
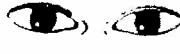
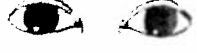
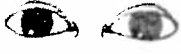
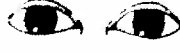
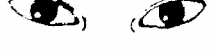
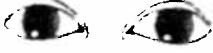


| Traits | Dominant (both heads) | Hybrid (one head, one tail) | Recessive (both tails) |
|------------------|---|---|---|
| Shape of face |  round (RR) |  round (Rr) |  Square (rr) |
| Cleft in chin |  absent (CC) |  absent (Cc) |  present (cc) |
| Hair |  curly (HH) |  wavy (Hh) |  straight (hh) |
| Widow's peak |  present (WW) |  present (Ww) |  absent (ww) |
| Spacing of eyes |  close together (EE) |  normal distance (Ee) |  far apart (ee) |
| Shape of eyes |  almond (AA) |  almond (Aa) |  round (aa) |
| Position of eyes |  straight (SS) |  straight (Ss) |  slant upward (ss) |
| Size of eyes |  large (LL) |  medium (Ll) |  small (ll) |

Figure 1









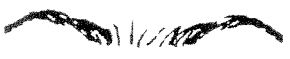












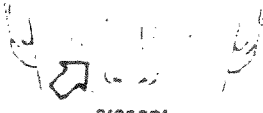
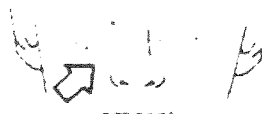




| Traits | Dominant (both heads) | Hybrid (one head, one tail) | Recessive (both tails) |
|----------------------|--|---|--|
| Length of eyelashes |  long (LL) |  long (Ll) |  short (ll) |
| Shape of eyebrows |  bushy (BB) |  bushy (Bb) |  fine (bb) |
| Position of eyebrows |  not connected (NN) |  not connected (Nn) |  connected (nn) |
| Size of nose |  large (LL) |  medium (Ll) |  small (ll) |
| Shape of lips |  thick (TT) |  normal (Tt) |  thin (tt) |
| Size of ears |  large (LL) |  normal (Ll) |  small (ll) |
| Size of mouth |  large (LL) |  medium (Ll) |  small (ll) |
| Freckles |  present (FF) |  present (Ff) |  absent (ff) |
| Dimples |  present (DD) |  present (Dd) |  absent (dd) |

Figure 1 (continued)

7. Using the recorded traits, draw the facial features for your offspring in Observations.

Observation:

Sex of offspring: _____
Put drawing on the back of the question sheet

Analyze and Conclude

1. What percent chance did you and your partner have of "producing" a male offspring? A female offspring? Explain your answer.
2. Would you expect the other pairs of students in your class to have an offspring similar to yours? Explain your answer.
3. If a woman who is homozygous for almond-shaped eyes (AA) marries a man who is heterozygous for almond-shaped eyes (Aa), what are the possible genotypes and phenotypes of their children?
4. What are the possible genotypes of the parents of a child who has wavy hair (Hh)?
5. Which traits in the investigation showed a blending of genes?
6. Do you think that anyone in your class has all the same genetic traits that you have? Explain your answer.
7. How might it be possible for you to show a trait when none of your relatives shows it?

8. There is a small village in a mountain valley in Spain where a large number of people are polydactyl (have more than five fingers or toes). Why does this trait tend to be passed on from generation to generation?

9. There have been causes in history where a king divorced his queen because she produced only daughters. Using your knowledge of genetics, explain why this was an incorrect move.