

Punnett Square Practice Worksheet

Name: _____

Date: _____

Questions:

1. What is the difference between genotype and phenotype?
2. If black fur (B) is dominant over white fur (b), what is the phenotype of a Bb dog?
3. What is the probability of producing a homozygous recessive (bb) offspring from two heterozygous parents (Bb × Bb)?
4. If a heterozygous brown-eyed dog (Ee) is crossed with a homozygous recessive blue-eyed dog (ee), what percentage of offspring will have blue eyes?
5. In plants, tall (T) is dominant over short (t). What is the expected phenotypic ratio from a Tt × Tt cross?

Answer Key:

1. Genotype refers to an organism's genetic makeup (e.g., Bb), while phenotype is its physical appearance (e.g., black fur).
2. The phenotype of a Bb dog is black fur because black is dominant.
3. 25% of the offspring will be homozygous recessive (bb).
4. 50% of the offspring will have blue eyes.
5. The expected phenotypic ratio from a Tt × Tt cross is 3 tall : 1 short.