PRACTICE WITH PUNNETT

In cats, dark hair (D) is dominant over light hair (d). Use a Punnett square to solve the following problems:

1.(a) If a cat that breeds pure for dark hair mates with a cat that breeds pure for light hair, what genotype will all the offspring have?

(b) What phenotype is this?

2.(a) What are the possible genotypes that would result from a cross of two of these offspring?

(b) For each kitten produced, what are the chances it would have light hair?

(c) If a litter of eight kittens is produced, how many are likely to have dark hair?

3. If the gene for round seeds in peas (R) is dominant, and the gene for wrinkled seeds (r) is recessive, what would be the resulting **phenotypes** of the following crosses: (a) RR x Rr (b) Rr x rr (c) RR x rr

4. In dogs, short hair is dominant and long hair is recessive.

(a) Show the results of a cross between a hybrid shorthaired dog and a homozygous longhaired dog.

(b) What genotypes are possible?

(c) What phenotypes are possible?

5. Use the Punnett square to show the results of a cross between two parents, each with one dominant gene for curly hair (C).