

# Punnett Squares

## Dihybrid Crosses

Name \_\_\_\_\_

Date \_\_\_\_\_

1. In horses, the coat color black is dominant (B) over chestnut (b). The trotting gait is dominant (T) over the pacing gait (t). If a homozygous black pacer is mated to a homozygous chestnut, heterozygous trotter, what will be the probabilities for genotype and phenotype of the F1 generation?


2. In rabbits, the coat color black dominant (B) over brown (b). Short hair is dominant (S) over long (s). In a cross between a homozygous black short-haired male and a brown homozygous long-haired female, what would be the probabilities for genotype and phenotype of the F1 generation?


3. Imagine that a couple is planning to have children. The male is heterozygous for tongue rolling and homozygous dominant for unattached earlobes. The female is homozygous recessive for tongue rolling and heterozygous for unattached earlobes. The couple is curious about the possibility and probability of their offspring inheriting these traits. The ability to roll ones tongue is dominant (R) over the "non-rolling" condition (r.) Unattached earlobes (U) are dominant over attached earlobes (u) Complete a Punnett square for this cross and record the probabilities for genotypes and phenotypes of the offspring as ratios!
