Hardy-Weinberg Principle

The original proportion of genotypes in a population remains constant

if

- population size is large
- random mating is occurring
- no mutations
- no genes are introduced or lost
- no selection occurs
  - means: all genotypes can survive and reproduce equally well

$$p^2 + 2pq + q^2 = 1$$

$$p + q = 1$$

p = frequency of the dominant allele in a population

q = frequency of the recessive allele in a population