> The Hardy-Weinberg equilibrium is reached after only one generation of random interbreeding

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

- p => frequency of the dominant allele
- q => frequency of the recessive allele
- \circ p + q = 1 => the frequencies of alleles on chromosomes must add up to 1
- \circ [p + q]² = 1 => diploid organisms have two copies of a gene
- $\circ \quad [p+q]^2 \Leftrightarrow P^2 + 2pq + q^2$
- \circ P² => frequency of homozygous dominant
- 2pq => frequency of heterozygote
- \circ q² => frequency of homozygous recessive

Production isolation

- > Populations of members of the same species can be stopped from reproducing Notesale.co.uk together because of a barrier
 - The populations are *reproductively isolated* 0
 - Such a barrier can be: 0
 - Geographical
 - al barriers prefen Alembers of a population finding eac
 - tion of rivers, rise of a volcano
 - Previev New populations can now have different allele frequencies
 - New environment can lead to new species •
 - Temporal
 - Refers to incompatible time frames that prevent populations or their gametes from encountering each other
 - Isolated by time
 - 0 Flowers bloom and animals mate at different times
 - Behavioural
 - Happens when one population's lifestyle and habits are not compatible with those of another population
 - Different courtship display
 - Related to the infertility caused by hybridization