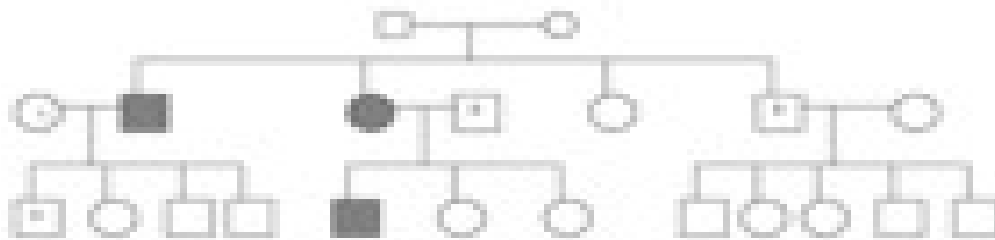


RECURRING GENETIC DISORDERS

1. Pedigree

A family pedigree is a family tree with the history of a particular trait shown across the generations. In pedigree, circles represent females, squares are used for males, and solid symbols indicate the individuals that express the phenotype in question. Parents are joined by a horizontal line and offspring are listed below parents from left to right in order of birth. The pedigree of individuals in the pedigree can often be deduced by following the patterns of inheritance.



Study the pedigree and answer the questions in your worksheet.

2. Incomplete Dominance

Some traits exhibit incomplete dominance. This means that a heterozygous individual may exhibit a phenotype that is intermediate between that of the dominant and recessive phenotypes.

EXAMPLE: In certain plants, a gene for flower color may exhibit incomplete dominance. A cross between a plant that is true breeding (i.e. homozygous) for red flowers (with a gene that is true breeding (i.e. homozygous) for white flowers) will result in offspring with pink flowers.

When crossing parents for alleles in the case of incomplete dominance, it is best to represent the alleles as distinct characters (with values $P^1 = \text{red}$ and $P^2 = \text{white}$).



Offspring (P^1P^2) in this cross will have intermediate (pink) flowers.



Practice this concept by completing the problems in your worksheet.