

Human Pedigree Analysis Problem Sheet

Adapted from: www2.sunysuffolk.edu/kennym/PedigreePractice.pdf

There are a number of different types of human pedigrees that you may encounter, however, there are only a few different modes of inheritance with which you will need to be familiar. The following pedigrees show you different examples of human traits that can be traced through generations. See if you can identify the modes of inheritance, and answer any questions directly related to each pedigree. While you are working on this, keep the following clues in mind:

Clues for Autosomal Inheritance

Recessive

- individual expressing trait has 2 normal parents
- two affected parents can not have an unaffected child

Dominant

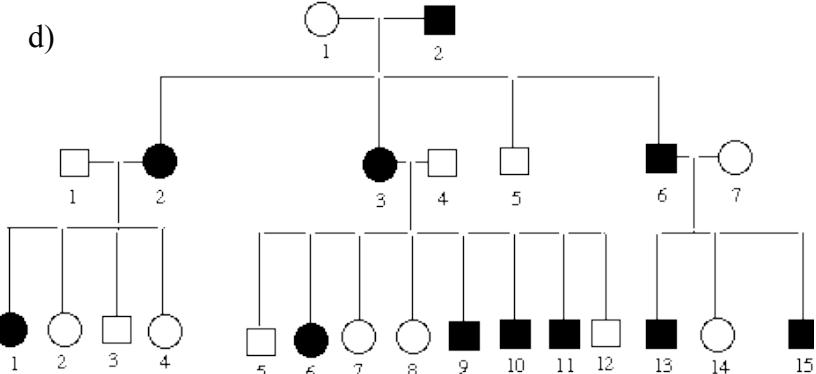
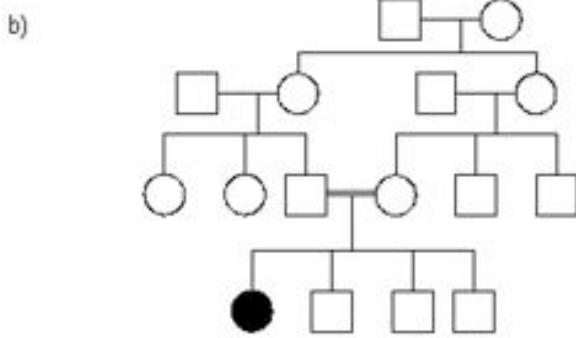
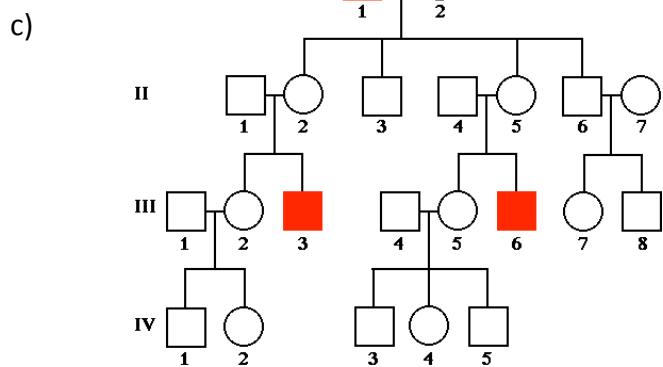
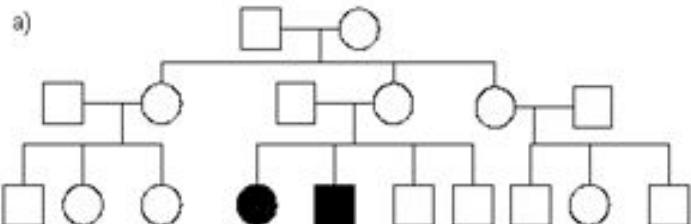
- every affected person has at least one affected parent
- each generation will have affected individuals

Clues for Sex-linked Inheritance

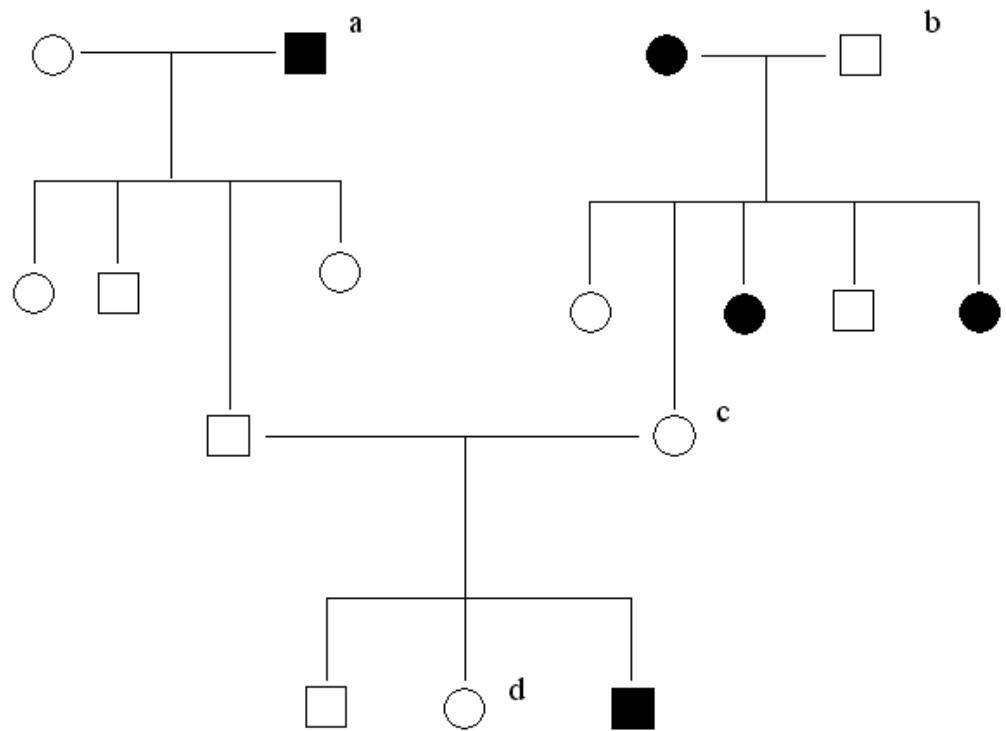
Recessive

- no father-to-son transmission
- predominantly males affected
- trait may skip generations

1. For each of the pedigrees below, identify the mode of inheritance and provide at least 2 reasons for your choice.



2. Below is a pedigree for an inherited lung disease. Provide the genotypes of each of the individuals marked with lower case letters.



3. Below is a pedigree for an inherited brain disease. Provide the genotypes of each of the individuals marked with lower case letters.

