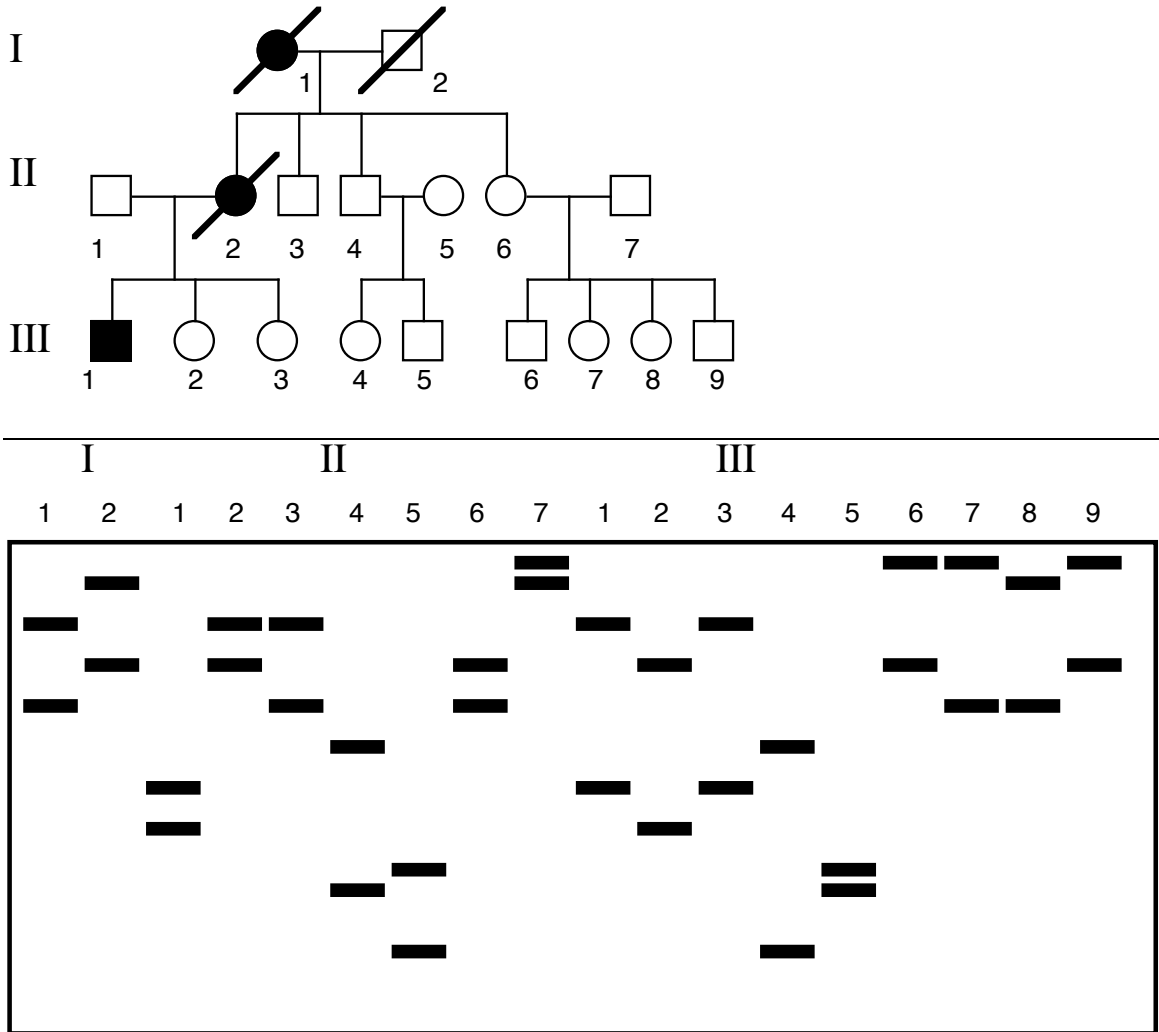


Staple!

1. Huntington's disease is a fatal, late onset, autosomal dominant genetic disease. Below is the pedigree and the results of PCR microsatellite analysis of the family afflicted by Huntington's disease. The individuals with lines drawn through are deceased. Since the disease strikes in the range of 30-50 a number of individuals in this pedigree may have the gene for the disease but just have not yet developed symptoms. Individuals with filled in symbols have, or had, the disease. Underneath the pedigree is a PCR analysis of a polymorphic site linked to the disease for each of the individuals in the pedigree.

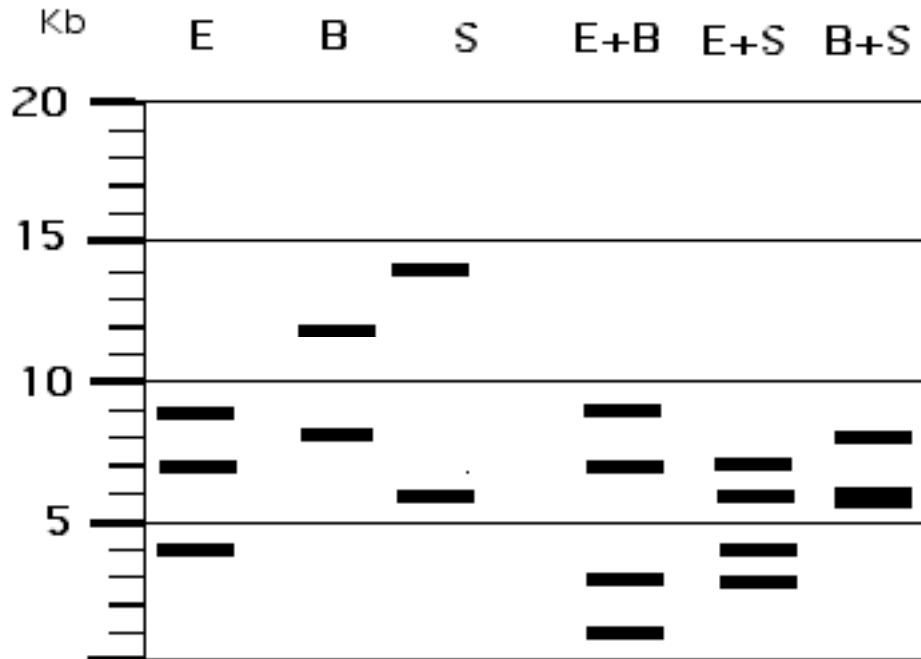


a) Judging by the PCR results, which individuals in generations II and III are likely to develop the disease? Why?

b) One of the individuals has unexpected PCR results. Which one? Give a possible explanation of the PCR results for this individual.

Staple!

2. REVISED You isolate a piece of DNA from a lambda library of genomic DNA. You cut the DNA with the enzymes EcoR1 (E), BamH1 (B), and Sal1 (S), with the following results:



a) What is the size of the piece of cloned DNA?

b) Draw a restriction map of this DNA.

Homework 7 Genetics Spring 2008

name (print) _____

Due March 19

Staple!

3. This question requires research online as well as an understanding of what we have covered in class.

What is CYP2B6?

Where is it located?

Why are investigators looking at it using SNPs?