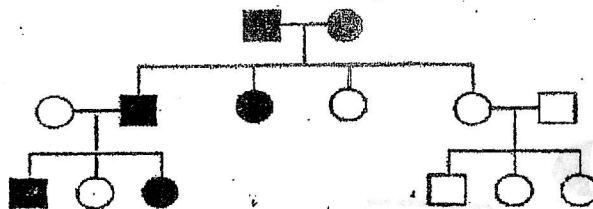


You may write on this sheet but you may need to attach an extra sheet for more space.

1. A man with a Y-linked disorder has three sons and three daughters by the same mother. His first son has two sons and two daughters. Draw the pedigree for this family. Since the disorder is y-linked, shade the people who would be affected.
2. Use the pedigree below to answer the following questions:
 - a. How many daughters are in the second generation? How many are affected by the trait?
 - b. How many daughters are married?
 - c. How many children in the third generation have the trait?
 - d. The pedigree shows how Huntington's Disease is inherited in this family. Huntington's is an autosomal dominant trait. Write the genotype of each person.



3. A 20 year old man diagnosed with Muscular Dystrophy, an X-linked recessive gene, has a sister who pregnant. His sister and her husband are healthy and think there is no way she can pass the disease on to their child. They do not know the sex of the unborn baby. If you were a genetic counselor, what would you tell the couple?
4. Draw the following pedigree: Generation One-Two parents, Generation Two-Two daughters and two sons, Generation Three-The first daughter marries and has two sons, the last son marries and has a daughter and a son.
Sickle Cell Anemia is an autosomal recessive disorder. Shade the pedigree to show how Sickle Cell Anemia could affect this family. It does not matter who you "give" the disease to as long as you shade appropriately. Do not forget to include carriers. When you have finished this problem, show Mrs. Handest and have her check it off before you continue to #5.
5. Research the following diseases in our book or online. Determine if each one is autosomal dominant, autosomal recessive, X-linked recessive, Y-linked.
 - a. Hemophilia
 - b. Colorblindness
 - c. Muscular Dystrophy
 - d. Cystic Fibrosis
 - e. Tay-Sachs
 - f. Marfans

Now look at each of the following pedigrees. Determine the pattern of inheritance for each. Write in the genotypes for each individual. Select a disorder from the list above that could be represented by each pedigree. Write that under the pedigree.

