

Name _____

Date _____

Pedigree Charts Worksheet(s)

Background Information:

Pedigree charts are very important to many different fields of science. One reason they are important is because, they help scientists understand the genetic patterns of diseases. It is important to be able to interpret pedigree charts in order to learn the pattern of a disease or condition. Specifically, using a pedigree chart, you can tell if the disease or condition is autosomal, X-linked, dominant, or recessive.

Before you start this activity it is important to review several symbols:



- Unaffected male



- Affected male



- Carrier male



- Unaffected female



- Affected female



- Carrier female

Procedure:

A. First you need to become comfortable in making a pedigree chart. Complete the following examples. You may refer to your notes if necessary.

1. How can you tell if a couple is married on a pedigree?

Write a one sentence description and draw an example.

2. How can you tell if the couple who is married had children? Write a one sentence description and draw an example.

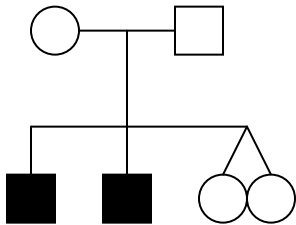
3. Draw a pedigree that represents Mary married to Greg and with 2 sons (Scott and Tyler) and 1 daughter (Karen). Please label the pedigree with the names of the people.

4. Draw a pedigree that represents Mary married to Greg, with 2 sons and 1 daughter. Their son, Scott, married April and had Sutton (a boy) and Kendall (a girl). Their daughter, Karen, married Harry and had Eliq (a son) and Tariq (a son). Please label the pedigree with the names of the people.

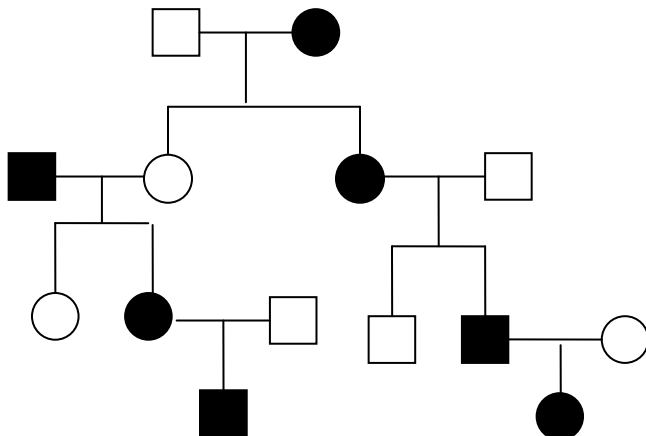
5. Draw a pedigree that represents Julie married to Jeff, with one daughter, Josephine. Josephine married Joseph and had Jason and Joe. Joe married Julia and had Shannon and fraternal twin boys, Mark and Alex. Mark married Alison and had Ray and Scarlet. Please label the pedigree with the names of the people.

A. Identify the following pedigree charts as autosomal, X-linked, recessive, and dominant. Please explain your answer.

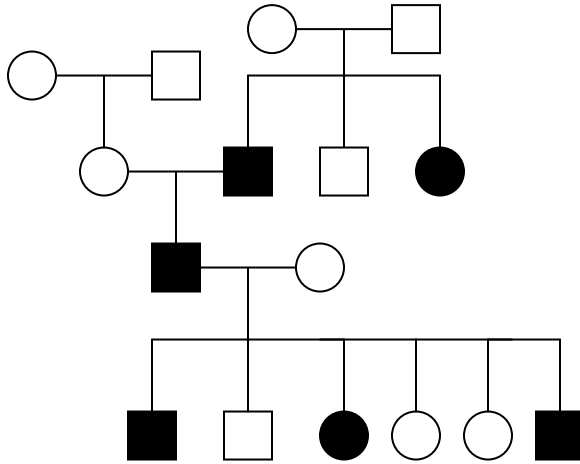
1. Is the following autosomal or X-linked? Is it dominant or recessive? Please explain.



2. Is the following autosomal or X-linked? Is it dominant or recessive? Please explain.



3. Is the following autosomal or X-linked? Is it dominant or recessive? Please explain.



- B. Now you must make a pedigree chart from the descriptions given. Tell whether it is autosomal or X-linked and whether it is dominant or recessive. Also, state which type of muscular dystrophy the pedigree could be based off of the list your teacher has given you. Label the pedigree with the names of the individuals.
- Chad and Veronica got married and had Brittany, Kristin, and Harry. It was discovered that Harry had muscular dystrophy. Brittany married Larry and had Stephan and Stephanie. Stephan also had muscular dystrophy. Larry's brother Barry also had muscular dystrophy but neither of their parents had the disorder.

Draw a pedigree:

Autosomal or X-linked? Dominant or recessive? Name the types of muscular dystrophy this pedigree chart could represent.

- b. Lisa and Ashton got married and had three girls, Cari, Mary, and Terry. It was discovered that Lisa had muscular dystrophy. Terry married Perry and had two boys, Pike and Tike. It was discovered that Terry and Pike had muscular dystrophy.

Draw a pedigree:

Autosomal or X-linked? Dominant or recessive? Name the types of muscular dystrophy this pedigree chart could represent.

- c. Debbie married David and had three children, Darren, Dawn, and Derek. David, Darren and Derek discovered they have muscular dystrophy. Derek married Didi and had two children, Denise and Destiny. Denise also has muscular dystrophy and married Dirk. They had two children, Dee and Deven. Dee has muscular dystrophy.

Draw a pedigree:

Autosomal or X-linked? Dominant or recessive? Name the types of muscular dystrophy this pedigree chart could represent.
