

**Sex-Linked PS Review**

Name \_\_\_\_\_

1. Duchenne Muscular Dystrophy is a recessive, *sex linked trait* that is carried on the X chromosome.

Mary is a carrier for Muscular Dystrophy ( $X^D X^d$ ).

Marcus does not have Muscular Dystrophy ( $X^D Y$ ).

What are the chances they'll have children with MD?

Boys (XY): \_\_\_\_\_  
 \_\_\_\_\_

Girls (XX): \_\_\_\_\_  
 \_\_\_\_\_


2.


Leona does not have Muscular Dystrophy and is not a carrier.

Larry does have Muscular Dystrophy.

What is Leona's genotype? \_\_\_\_\_

What is Larry's genotype? \_\_\_\_\_

Will any of their children have MD? \_\_\_\_\_

What fraction of their daughters will be carriers? \_\_\_\_\_

3. Hemophilia is a recessive, sex linked trait that prevents blood from clotting.

Victoria has hemophilia ( $X^h X^h$ )

Nicholas is healthy ( $X^H Y$ )

What are the chances that Victoria and Nicholas will have a child with Hemophilia?

Boys: \_\_\_\_\_

Girls: \_\_\_\_\_


**Bonus:** What was Victoria's father's genotype? \_\_\_\_\_

4.

Paige is a carrier for Hemophilia.  
Peter does not have the disease.

What is Paige's genotype? \_\_\_\_\_

What is Peter's genotype? \_\_\_\_\_

Will any of their children have hemophilia? \_\_\_\_\_

What fraction of their sons will have the disease? \_\_\_\_\_


5. Red-green colorblindness, the most common type of colorblind disorder is sex linked, recessive.

Sara is colorblind. What is her genotype? \_\_\_\_\_

Scott is not colorblind. What is his genotype? \_\_\_\_\_

What fraction of their sons will be colorblind? \_\_\_\_\_

What fraction of their daughters will be colorblind? \_\_\_\_\_


6.


Nancy is a carrier for being colorblind.

Monroe is colorblind.

What is Nancy's genotype? \_\_\_\_\_

What is Monroe's genotype? \_\_\_\_\_

What fraction of their sons will be colorblind? \_\_\_\_\_

What fraction of their daughters will be colorblind? \_\_\_\_\_