**Outcome Practice: Pedigree Charts**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Biology 12**

**Directions:** Answer the questions below using your notes and knowledge of genetics. The key below will assist you in understanding pedigree chart information.

**Pedigree Chart Key:**

1. The following pedigree chart looks at horses and the trait that deals with fast or slow-twitch muscle response. Slow-twitch muscle is shaded below.



I

II

III

1. Explain the family relationship that 12 has with 2.
2. State the genotype for each horse in the pedigree chart. If you are uncertain of its genotype, state all that are applicable.
3. Can either individual 8 or 9 be homozygous? Why?
4. Examine the following pedigree chart for colour blindness in humans, shaded areas represent a colour blinded person.



I

II

III

1. What is the relationship between 10 and 11?
2. Indicate the genotype for each of the individuals found on the pedigree chart. If you are uncertain of its genotype, state all that are applicable.
3. As a doctor you are faced with an unknown disease showing in a family. The below pedigree chart maps out the occurrence of this disease with the affected individuals being shaded in.

I

II

III

IV



1. What is the relationship between 1 and 4?
2. Indicate the genotype for each of the individuals found on the pedigree chart. If you are uncertain of its genotype, state all that are applicable.
3. The following pedigree chart shows a family that has hemophilia run through it. The individuals shaded have hemophilia.



I

II

III

1. What is the relationship between 7 and 8?
2. Indicate the genotype for each of the individuals found on the pedigree chart. If you are uncertain of its genotype, state all that are applicable.