

Genetics Review

Genetics Vocabulary

1. Chromosome: _____
 2. Gene: _____
 3. Homozygous: _____ Examples:
 4. Heterozygous: _____ Examples:
 5. If an organism is heterozygous for a trait, the _____ trait is the one that is expressed.
 6. Punnett square: _____
 7. Genotypes are the combinations of _____ present in the _____ of the organism.
The phenotype is the _____.
 8. Dominant traits are _____.
Recessive traits are _____.
Is the dominant trait always the "good" trait? _____ Is the dominant trait always the one seen the most often? _____.
- Gametes: _____

List and explain Mendel's 3 Principles

- 1.
- 2.
- 3.

Punnett squares

- A. Cross a bird with ash red feathers (BB) with a bird that has blue feathers (bb). What are the chances of producing birds with ash red feathers from this cross?
- B. Cross two people who are heterozygous for six fingers (Ff). Five fingers is recessive. What is the probability of the children having only five fingers?
- C. The sex chromosomes in men are _____. This means that any gene on their _____ chromosome will be expressed, even if it is a _____ trait. Traits on the sex chromosome are called _____.

Cross a man who is colorblind (X^cY) with a woman who is a carrier of colorblindness (X^CX^c). What are the chances of the **girls** being colorblind?

Define the following Types of inheritance and give an example of each.

Incomplete Dominance

Co dominance

Multiple Alleles

Sex-linked

Polygenetic

Describe the following genetic disorders

Tay - Sachs disease

Cystic Fibrosis

Phenylkonuria

Huntington's disease

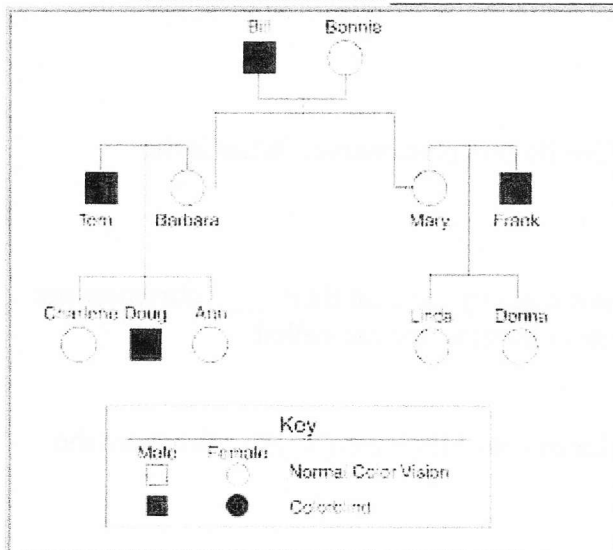
Down syndrome

Hemophilia

Color Blindness

Pedigree Analysis

1. In a pedigree, males are represented by _____ and females are represented by _____. An affected individual is _____.
2. A pedigree can also help you determine if a person is a carrier. What is a carrier?
3. You can also determine if a trait is _____, carried on the chromosomes that are not the X or Y, or sex-linked, carried on the _____. Two common examples of sex-linked traits that are evident by pedigree analysis are colorblindness and _____.



Could Mary be a carrier?
Why or why not?

Could Barbara and Tom
have daughters that are
colorblind? Why or why
not?

4. Karyotyping: _____



What sex is the person on the left? _____

What is the problem with the karyotype on the left? _____

What is the sex of the person on the right? _____

What is the problem with the karyotype on the right? _____