**SIMPLE GENETICS**

1. A chemical/chromosomal factor that determines traits is a(n):

 a. Allele c. Genotype

 b. Gene d. Phenotype

2. Variations of a gene are referred to as a(n):

a. Allele c. Genotype

 b. Gene d. Phenotype

3. This genetic disorder doesn’t allow the affected person’s to clot properly.

 a. Achondroplasia c. Hemophilia
 b. Huntington’s d. Cystic Fibrosis

4. This dominant, lethal genetic disorder is late acting and is usually passed on to offspring before the individual knows he/she has it.

 a. Colorblindness c. Achondroplasia
 b. Sickle-cell Anemia d. Huntington’s

5. This genetic disorder causes a build up of mucous in the lungs forcing the person to cough a lot.

a. Cystic Fibrosis c. PKU

 b. Huntington’s d. Hemophilia

6. This disorder is caused by an enzyme that is not able to break down phenylalanine.

 a. Cystic Fibrosis c. PKU

 b. Huntington’s d. Hemophilia

7. This type of allele will always be shown if it present.

 a. Recessive b. Dominant

8. The genetic make up of an individual is referred to as a(n):

a. Allele c. Genotype

 b. Gene d. Phenotype

9. Just by looking at an individual and seeing their physical traits you can see their:

a. Allele c. Genotype

 b. Gene d. Phenotype

10. In order for a recessive disorder to be shown in an individual…

 a. Only one recessive allele must be present.

 b. Only one dominant allele must be present.

 c. Both dominant alleles must be present.

 d. Both recessive alleles must be present.

11. This type of allele if present will ALWAYS BE SHOWN:

1. Dominant b. Recessive

12. This type of allele if present will be HIDDEN unless **both** alleles are together:

1. Dominant b. Recessive

13. HOMOZYGOUS MEANS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (SAME ALLELES/ DIFFERENT ALLELES)

14. HETEROZYGOUS MEANS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (SAME ALLELES/ DIFFERENT ALLELES)

13. Using the letter A, show a carrier genotype. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. Using the letter B, show me a non-carrier genotype. \_\_\_\_\_\_\_\_\_\_\_\_\_

15. Using letter N, show me a person who is affected by a recessive disorder. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**COMPLEX GENETICS:**

1. What does polygenic mean?

2. Define multiple alleles. What is one example we used in class?

3. What are complex characters? Example?

4. What is incomplete dominance? Example?

5. What is codominance? Example?

**6. BLOOD TYPE PRACTICE PROBLEMS!**

A. Woman with a homozygous blood type A has a child with a man who is heterozygous blood type B. Draw the punnett square for that couple.

B. A man who has homozygous type B blood has a child with a woman who has the recessive type O blood. What is the PERCENT chance of them having a child with A blood?

**PEDIGREES:**

1. Is this a male or female?

RECESSIVE DISORDERS:

1. How would you describe this person?
2. Using the letter A draw this person’s genotype.
3. How can you tell if a pedigree is showing a recessive disorder?

DOMINANT DISORDERS:

1. What are the two possible genotypes for this person?
2. How can you tell if a pedigree is showing a DOMINANT disorder?

SEX-LINKED:

1. Can males carry a sex linked disorder?
2. How would you describe this person?
3. What is this person’s genotype?
4. How would you describe this person?
5. What is this person’s genotype?