Assignment:\_\_\_\_

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour:\_\_\_\_\_\_

**Genetics – Review Sheet**

**Vocabulary**

Meiosis
Genetics
Heredity
Pure breeding
Hybrid
Phenotype
Genotype
Homozygous
Heterozygous
Gene
Homologous Chromosomes
Mutation

**Monohybrid Crosses**

1. What is the difference between a genotype and phenotype?
2. What is the difference between being heterozygous and homozygous?
3. In the heterozygous genotype, which allele masks the other?
4. What does it mean to be a carrier?
5. If hairy toes is dominant to un-hairy toes, show a Punnett square below that shows the cross between two heterozygous parents:

	1. What is the genotypic ratio of the cross?
	2. What is the phenotypic ratio of the cross?
6. Use the same traits from #4, but cross parents who are heterozygous and homozygous recessive:

	1. What is the genotypic ratio of the cross?
	2. What is the phenotypic ratio of the cross?
7. Use the same traits from #4, but cross parents who are heterozygous and homozygous dominant:

	1. What is the genotypic ratio of the cross?
	2. What is the phenotypic ratio of the cross?

**Dihybrid Crosses (25-29)**

1. What is the difference between a monohybrid and dihybrid cross?
2. If a parent has the following genotype, GgTt, how many different combinations of alleles could be present in its gametes?

If A is a dominant allele for blue eyes and a is recessive allele for green eyes, B is the dominant allele for tall and b Is the recessive allele for short, examine the following cross.

1. Describe the phenotype of the parents in the cross.
2. What is the phenotypic ratio of the offspring in the cross?
3. What is the probability of having blue eyed short child?

**Mendel’s Experiments**

1. Describe both of Mendel’s Laws.

**Exceptions to Mendel**

1. Describe what is different about the following crosses and list an example of each:
	1. Co-dominant
	2. Incomplete Dominant
	3. Multiple Alleles
	4. Polygenetic
	5. Sex-linked
2. Who is more likely to have a sex-linked trait and why?

**Mutations**

1. How can you “get” mutations?
2. What kind of effect could mutations have on a person?

**Pedigree**

1. How many generations are show?
2. Is this autosomal or sex-linked?
3. Is this dominant or recessive?
4. What does it mean if the circles/squares are half shaded in?
5. What does it mean if the circles/squares are totally shaded in?
6. Use the letter A to fill in the genotypes of the pedigree.