Name _____ Period _____ Date _____

Mendelian Genetics – Punnett Square

1. In humans, curly hair is dominant over straight hair. A woman heterozygous for hair curl marries a man with straight hair and they have four children. Predict their childrens' genotype and phenotype.

2. A woman who is homozygous normal for vision and a man who is homozygous for glaucoma have children. What is the probability that any of their children will have glaucoma? Glaucoma is dominant to normal vision.

3. Two brown-eyed parent have two children with blue eyes. Give the genotypes of each family member.

4. Albinism (lack of pigment) in humans is caused by a recessive gene. If normal parents have an albino child, what is the probability that their next child will be normal for pigment color?

5. Free ear lobes are dominant to attached ear lobes in humans. If a homozygous, recessive male marries a homozygous dominant female, what will be the phenotypic and genotypic ratios of their offspring?

   If one of these female children were to marry a man with her genotype, what would be the phenotypic ratio of their children?