Part I: Make a Punnett Square for each cross below. Black fur (B) is dominant to gray fur (b)

Directions: Highlight all genotypes of your parents! Be sure to list the potential genotypes and phenotypes of the offspring with their percent! Then create a pedigree for the trait.

1. If the mother is homozygous recessive and the father is homozygous dominant.
   1. What are the genotypes of the parents
   2. Write the genotype probabilities
   3. Write the phenotype probabilities.
   4. Create a pedigree

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1. If the mother is heterozygous and the father is heterozygous
   1. What are the genotypes of the parents
   2. Write the genotype probabilities
   3. Write the phenotype probabilities.
   4. Create a pedigree

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1. If the mother is heterozygous and the father is homozygous dominant
   1. What are the genotypes of the parents
   2. Write the genotype probabilities
   3. Write the phenotype probabilities.
   4. Create a pedigree

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Now complete the crosses for sex linked traits. Remember that males only need one of the x-linked traits to display it because y is always recessive.

1. A woman who is a hemophiliac carrier and a man who is not.
   1. What are the genotypes of the parents
   2. Write the genotype probabilities
   3. Write the phenotype probabilities.
   4. Create a pedigree

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1. A man who is hemophiliac and a woman who is hemophiliac.
   1. What are the genotypes of the parents
   2. Write the genotype probabilities
   3. Write the phenotype probabilities.
   4. Create a pedigree

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1. A man who is hemophiliac and a woman who is not hemophiliac and not a carrier.
   1. What are the genotypes of the parents
   2. Write the genotype probabilities
   3. Write the phenotype probabilities.
   4. Create a pedigree

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