

## Meet the Charltons

The Charltons are a family of five. In addition to mom and dad, there is a son named Tyler, and two daughters named Terry and Anna. Terry is the oldest of the children and Anna is the youngest. Mr. and Mrs. Charlton have black hair. Terry and Tyler have red hair and Anna has black hair like her parents. Mrs. Charlton's mother has black hair and knows that her genotype is pure dominant. Both of Mr. Charlton's parents are hybrids.

Make a pedigree below to represent all of the members of the Charlton family. Add a name label for each person

Questions:

1. How many generations are in your pedigree?
2. What is the genotype and phenotype of Mrs. Charlton's father? How do you know?
3. If Mr. and Mrs. Charlton had a fourth child, what are the possible genotypes and phenotypes for that child?
4. If Anna marries a red-head, what is the probability that her first born will have red hair? How do you know this?