**Blood Grouping Problems**

1. If a man with A type blood marries a woman of O type blood and they have five children, all of blood type A:
   1. What is the most probable genotype of the man?
   2. What is the genotype of the woman?
   3. Of the children?
2. A friend of yours has B type blood. He knows his mother has O type blood.
   1. What is his genotype?
   2. What genotypes of blood might his father have?

With this basic information, find probably solutions to the following genetic problems:

1. What blood types might possibly result in children of a family whose mother has B blood and whose father has AB blood?
2. Suppose a father of blood type A and a mother of type B has a child of type O. What types are possible in their children?
3. Suppose a father of type B and a mother of type O have a child of type O. What are the chances that their next child will be type O? \_\_\_\_\_\_\_\_\_ Type B? \_\_\_\_\_\_\_\_\_\_ Type A? \_\_\_\_\_\_\_\_\_\_\_ Type AB? \_\_\_\_\_\_\_\_\_\_\_\_.
4. Assuming you do not know the blood type of your future husband or wife, but you do know yours, what blood type might you possibly expect your children to have? What blood types can’t they possibly have?
5. Two type AB parents took home a newly born type A baby from the hospital and decided it was not their baby because it did not seem to resemble either. They claimed another couple had their baby. The other parents were both type A and took home a type O baby. What is their solution to this problem?
6. You are the judge in a case in which a type O man claimed a $50,000 inheritance after the death of type A and type AB parents.
   1. What would be your decision? Explain.
   2. What if the man had type B blood? Explain.
7. From question 7, make a pedigree which represents this problem. Label each individual with their blood type and their genotype.