Blood Types Worksheet Name _____

Human blood types are determined by genes that follow the CODOMINANCE pattern of inheritance. There are two dominant alleles (I^A and I^B) and one recessive allele (i).

1. Write the genotype for each person based on the description:

   a. Homozygous for the "B" allele _____
   b. Heterozygous for the "A" allele _____
   c. Type O _____
   d. Type "A" and had a type "O" parent _____
   e. Type "AB" _____

2. Pretend that Brad Pitt is homozygous for the type B allele, and Angelina Jolie is type "O." **What are all the possible blood types of their baby?**

3. Draw a Punnett square showing all the possible blood types for the offspring produced by a type "O" mother and an a Type "AB" father

4. Two parents think their baby was switched at the hospital. Its 1968, so DNA fingerprinting technology does not exist yet. The mother has blood type "O," the father has blood type "AB," and the baby has blood type "B."
   a. Mother's genotype: _____
   b. Father's genotype: _____
   c. Baby's genotype: _____ or _____
   d. Punnett square showing all possible genotypes for children produced by this couple
   e. Was the baby switched?

5. Based on the information in this table, which man **could not** be the father of the baby? Justify your answer with a Punnett square.

Name	**Blood Type**
Mother	Type A
Baby	Type B
Sammy the player	Type O
George the sleeze	Type AB
The waiter	Type A
The cable guy	Type B

6. The young child of a Korean couple who just moved to the United States has been kidnapped. This couple does not have any medical records on file in the U.S. or Korea, so the family members' blood types are unknown. Not far from their house, the child's hat is found with some blood on it. It is determined that the father has Type A blood, and the mother has Type B. The blood on the hat is Type A. Is there any way that the blood on the hat could be their child's? Justify your answer with a Punnett Square.