**Multiple Alleles- Honors Bio** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # \_\_\_\_\_

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

1. Write the genotype for each person based on the description:
   1. Homozygous for the “B” allele \_\_\_\_\_\_
   2. Heterozygous for the “A” allele \_\_\_\_\_\_
   3. Type O \_\_\_\_\_\_
   4. Type “A” and had a type “O” parent \_\_\_\_\_\_
   5. 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.”
   1. Mother’s genotype: \_\_\_\_\_\_\_
   2. Father’s genotype: \_\_\_\_\_\_\_
   3. Baby’s genotype: \_\_\_\_\_\_ or \_\_\_\_\_\_\_\_
   4. Punnett square showing all possible genotypes for children produced by this couple
   5. Was the baby switched?
5. Based on the information in this table, which men **could not** be the father of the baby? Justify your answer with a Punnett square.

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| **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 |