Comprehension problems

1. If a mother and father with heterozygous type A and heterozygous type B blood, respectively, have children, determine the following:
   a. P1 genotypes: ________________
   b. F1 genotypes: ________________
   c. F1 phenotypes: ________________
   d. Proportion of F1 expected to have type O blood: _____
   e. Proportion of F1 expected to have type A blood: _____
   f. Proportion of F1 expected to be II: _____

2. A mother and father with type A and type B blood, respectively, find out that their biological daughter has type O blood. Explain whether or not this is possible.

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   ________________________________________________________________

3. A father with type B blood finds out his daughter has type A blood, even though his wife is type B, as well. Is he likely the father? Explain why or why not.

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4. Sandy finds out that she has type A blood type. She knows her mother has type B blood type, but is uncertain about her father’s blood type. What are the possible blood type genotypes of Sandy’s father?

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5. Peter has type O blood. What are the possible genotypes of his parents?

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   ________________________________________________________________

6. Ellie has heterozygous type B blood. Her mother and father, respectively, have type O and heterozygous blood type B. What are the possible blood genotype and phenotype combinations of her maternal and paternal grandparents?
   Genotype(s):
   Maternal: ________________________________
   Paternal: ________________________________
   Phenotype(s):
   Maternal: ________________________________
   Paternal: ________________________________

7. If Michael has type O blood, can he receive type A, type B, type AB and/or type O blood? Can he donate his blood to type A, type B, type AB, and/or type O individuals? ________________________________