

1. Mother's blood type is heterozygous A and the dad's blood type is heterozygous B, use this information to answer the following questions.

- a) What is the chance of having a child with blood type A? _____
- b) What is the chance of having a child with blood type B? _____
- c) What is the chance of having a child with blood type AB? _____
- d) What is the chance of having a child with blood type O? _____

2. If mom is homozygous A and dad is O, please answer the following questions.

- a) What is the chance of having a child with blood type A? _____
- b) What is the chance of having a child with blood type B? _____
- c) What is the chance of having a child with blood type AB? _____
- d) What is the chance of having a child with blood type O? _____

3. Chip and Amber had a child with B blood. Chip is heterozygous A and Amber is homozygous B. Is Chip the father? Please explain why or why not.

4. Adrienne and Jason were at the hospital to have a baby. Jason has blood type A and Adrienne has blood type AB. The hospital brings a child to them that they believe is not theirs. The blood test shows the baby is homozygous A. Will they be suing the hospital? Explain your answer.

5. Jennifer claims Matt is the father of her heterozygous B child. Matt claims he is not, so he agrees to blood test. Jennifer has blood type AB and Matt is tested to be homozygous A. Could he be the father? Explain.

6. Casey is an orphan who has homozygous B blood and is looking for her biological parents. She finds her mother who is heterozygous B. How will she tell which of the following men could be her father? Explain your answer and tell who is.

- a) Austin – Homozygous A
- b) Ben – Homozygous A
- c) Brandon – O
- d) Justin – Homozygous B
- e) Kevin – AB
- f) Steven – AB
- g) Tony – Heterozygous A

7. Amber, an orphan, has blood type heterozygous A. The orphanage burned down in a fire and all records were lost. There are 3 couples looking for their child, which of the couples could be mom and dad? Explain.

- a) Emma – Homozygous A
Austin – O

- b) Shannon – Heterozygous B
Brown – AB

- c) Brittany – O
Bryan – Heterozygous A

8. Will claims he is the father of Sara’s child. Sara says there is no way, that Jacob is the father of her child. Will decides to take her to court, the judge orders blood tests and the following information is found.

- Sara has heterozygous A blood
- Jacob has homozygous B blood
- Will has AB blood
- The baby has O blood

- a) Is Sara the mother? _____
- b) Is Jacob the father? _____
- c) Is Will the father? _____
- d) Does the court case continue? _____
- e) If yes, what will the judge require next? _____

9. Why is blood typing important? (Give 3 reasons)

10. What happens if you do not get the correct blood type? Be specific, not just you die!!

11. Please make the following cross. Mom: TTYy Dad: ttyy

Genotype: _____

Phenotype: _____
