

Activity

Human Genetics

A Quick Switch?

In the maternity ward, Mrs. Bright and Mrs. Light shared a room. When they were ready to go home, Mrs. Bright insisted that she had been given the wrong baby. The babies looked very much alike, and unfortunately, no one could find a record of the babies' footprints. Hospital officials told Mrs. Bright she was mistaken and sent her and the baby home. Mrs. Bright eventually asked the hospital to perform identification tests. Several weeks later, blood tests showed the following data.

Mrs. Bright →	type AB	Mrs. Light →	type A
Mr. Bright →	type O	Mr. Light →	type A
Baby at Bright's house →	type O	Baby at Light's house →	type A

1. What is Mrs. Bright's phenotype? _____
 What possible genotypes can Mrs. Bright have? _____
2. What is Mr. Bright's phenotype? _____
 What possible genotypes can Mr. Bright have? _____

Using the Punnett square, show the possible blood genotypes of a child born to the Brights.

3. What is Mrs. Light's phenotype? _____
 What possible genotypes can Mrs. Light have? _____
4. What is Mr. Light's phenotype? _____
 What possible genotypes can Mr. Light have? _____

Using Punnett squares, show possible blood genotypes of a child born to the Lights.

5. Was there a mixup of babies at the hospital? Explain. _____

6. List the combinations of phenotypes in the parents that would result in a child with type A blood. _____
