

SC.912.L.16.1 – Genetics – Example 2 Answer

Alleles for the A and B blood cell antigens are codominant. The condition where no antigens are present on the blood cells (type O blood) is a recessive trait. Which set of parents can most likely produce a child with type O blood?

- A. one parent with type AB blood, and the other parent with type A blood**
- B. one parent with type AB blood and the other parent with type O blood**
- C. one parent with heterozygous type A blood, and the other parent with type O blood**
- D. one parent with homozygous type A blood, and the other parent with homozygous type B blood**

Answer

C. one parent with heterozygous type A blood, and the other parent with type O blood

In order for a recessive condition to be expressed, the individual must have two recessive alleles, one from the mother and one from the father. C is the only condition in which both parents possess an O allele to pass on to the offspring.