

Biology 155 - Quiz 9

1. Albinism in hamsters is due to a recessive allele. If two heterozygotes are crossed, what proportion of their offspring is expected to be nonalbino?
 - a. 0
 - b. 1/4
 - c. 1/2
 - d. 3/4
 - e. all
2. Given the cross AaBb x aabb, if the genes are on different chromosomes what proportion of the offspring should have the dominant phenotype for the A gene and the dominant phenotype for the B gene (ie. A-B-)?
 - a. 9/16
 - b. 3/8
 - c. 1/4
 - d. 3/16
 - e. 1/2
3. Given the cross AaBb x aabb and the resulting progeny numbers:

AaBb-20	aabb-20
Aabb-30	aaBb-30

What is the recombination frequency between the two genes?

- a. 20%
 - b. 30%
 - c. 40%
 - d. 50%
4. If a woman of blood type A has a child of blood type B then what blood types could the father be?
 - a. A or AB
 - b. B or AB
 - c. AB or O
 - d. AB
 5. Which statement about allelic interactions is NOT correct?
 - a. recessive alleles usually code for a protein that does not function normally
 - b. recessive alleles can be more common than dominant alleles in a population
 - c. codominant alleles produce different functional proteins
 - d. two parents with a recessive phenotype can produce a child with a dominant phenotype