Bozeman: Solving Hardy-Weinberg Problems

AP Biology Big Idea 1

http://www.bozemanscience.com/solving-hardy-weinberg-problems

1. Red hair is a _____ gene so you need _____ copy(ies) of it.
2. A gene pool is the genes of a population_____
3. Hardy Weinberg variables (Definition not example value)
    a. p=_____
    b. q=_____
    c. p+q=____
4. To find the likelihood of pulling two alleles in order _____the frequency of each (math function).
5. Two alleles can be pulled in any order. How can this be accounted for?

6. The Hardy Weinberg Equation is :$p^2 + 2pq + q^2$
    a. p^2=_____
    b. 2pq=_____
    c. q^2=_____
    d. This is about individual _____

-Follow along with Mr. Anderson and solve the problems. 16% of the population is unable to taste PTC. The non-tasters are recessive for the tasting gene.

1. What percent of individuals in the population are tasters?

2. What is the Frequency of the dominant and recessive allele?

3. What percentage of the population are heterozygous for the trait?

-Delta-32 mutation, a recessive gene, gives humans protection from HIV infection. The allele frequency in a swedish town is 20%

1. What percent of the population have two copies of the gene?

2. What percent of the population are less susceptible to the disease since they are heterozygous?