

## VIDEO GUIDE FOR BOZEMAN BIOLOGY – HARDY WEINBERG

1. What is a phenotype?
2. What is a gene pool?
3. What does “p” represent?
4. What does “q” represent?
5.  $P + q$  always equals \_\_\_\_\_
6. What does  $p^2$  represent?
7. What does  $q^2$  represent?
8. What does  $2pq$  represent?
9. Why is there a “2” in “ $2pq$ ” but not in “ $p^2$ ” nor “ $q^2$ ”?

16% of a population is unable to taste the chemical PTC. These non-tasters are recessive for the tasting gene.

10. What percentage of individual in the population are tasters?
11. What is the frequency of the dominant ALLELE?
12. What is the frequency of the recessive ALLELE?
13. What percentage of the population is heterozygous for the trait?

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

14. What percentage of the population has two copies of the delta-32 allele and is therefore immune to HIV?
15. What percentage of the population is heterozygous for the allele?