**BOZEMAN: SOLVING HARDY-WEINBERG PROBLEMS** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # \_\_\_\_\_\_

<https://www.youtube.com/watch?v=xPkOAnK20kw&t=7s>

\*Recommended to watch this video FIRST: <https://www.youtube.com/watch?v=oEBNom3K9cQ>

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 p2 represent?
7. What does q2 represent?
8. What does 2pq represent?
9. Why is there a “2” in “2pq” but not in “p2” nor “q2”?

**Stop the video & solve (then click play & check your answer): 16% of a population is unable to taste the chemical PTC. These non-tasters are recessive for the tasting gene.**

1. What percentage of individual in the population are tasters?
2. What is the frequency of the dominant ALLELE?
3. What is the frequency of the recessive ALLELE?
4. What percentage of the population is heterozygous for the trait?

**Stop the video & solve (then click play & check your answer): The delta-32 mutation, a recessive allele, gives humans protection from HIV. The allele frequency in a town in Sweden is 20%.**

1. What percentage of the population has 2 copies of the delta-32 allele and is therefore immune to HIV?
2. What percentage of the population is heterozygous for the allele?