Practice Problems

Hardy Weinberg Equation
Practice Problems

1. Scale coloration of lizards has a complete dominance relationship where green scales are dominant over blue scales. There are 1,024 individuals with the genotype GG, 512 individuals with the genotype Gg, and 64 individuals with the genotype gg.
   Find: the frequency of the dominant and recessive alleles and the frequency of individuals with dominant, heterozygous, and recessive genotype.

2. The next generation of lizards has 1092 individuals with green scales and 108 individuals with blue scales. Is the population in Hardy-Weinberg Equilibrium? Solve for p and q.

3. Rabbit's ears can be either short or floppy, where short ears are dominant over floppy ears. There are 653 individuals in a population. 104 rabbits have floppy ears and 549 have short ears.
   Find: the frequency of the dominant and recessive alleles and the frequency of individuals with dominant, heterozygous, and recessive genotypes.

4. The next generation of rabbits has 560 individuals with short ears and 840 individuals with floppy ears. Is the population in Hardy-Weinberg Equilibrium? Solve for p and q.

5. Petal coloration of pea plants has a complete dominance relationship where purple petals are dominant over white petals. There are 276 plants, 273 have purple petals.
   Find: the frequency of the dominant and recessive alleles and the frequency of individuals with the dominant, heterozygous, and recessive genotype.

6. The next generation of pea plants has 552 plants, 546 have purple petals. Is the population in Hardy-Weinberg Equilibrium? Solve for p and q.

INB ✓ 5/21
Show work!