Hardy Weinberg Problem Set

**YOU MUST SHOW WORK FOR CREDIT**

Useful formulas:

p2 + 2pq + q2 = 1

|  |  |  |
| --- | --- | --- |
|  | p | q |
| p | p2 | pq |
| q | pq | q2 |

p + q = 1

1. What do p and q represent?
2. What do p2, 2pq, and q2 represent?

Use the table above to answer questions 3-8:

1. In a population of mice, the frequency of brown fur is 0.16. What is the frequency of the (recessive) allele for brown fur?
2. What is the frequency of the allele for (dominant) black fur?
3. What is the frequency of black fur?
4. In a different population of mice, the frequency of black fur is 0.51. What is the frequency of the B (black) allele?
5. What is the frequency of the (b) brown allele?
6. What is the frequency of brown fur?