Directions: The next five questions, numbered 121–125, require numeric answers. Determine the correct answer for each question and enter it in the grid on page 3 of the answer sheet. Use the following guidelines for entering your answers.

- Start your answer in any column, space permitting. Unused columns should be left blank.

- Write your answer in the boxes at the top of the grid and fill in the corresponding circles. Mark only one circle in any column. You will receive credit only if the circles are filled in completely.

- Provide your answer in the format specified by the question. The requested answer may be an integer, a decimal, or a fraction, and it may have a negative value.

- To enter a fraction, use one of the division slashes to separate the numerator from the denominator, as shown in the example below. Fractions only need to be reduced enough to fit in the grid.

- Do not enter a mixed number, as this will be scored as a fraction. For example, 2 1/2 (two and one-half) will be scored as 21/2 (twenty-one halves).
121. Some people have the ability to taste a bitter chemical called phenylthiocarbamide (PTC). The ability to taste PTC is due to the presence of at least one dominant allele for the PTC taste gene. The incidence of nontasters in North America is approximately 45%. Assuming the population is in Hardy-Weinberg equilibrium, what percent of the North American population is homozygous dominant for the ability to taste PTC? Provide your answer as a number between 0 and 1 to the nearest hundredth.

122. Based on the data shown, calculate the average rate of increase in oxygen consumption for animals acclimated to 5°C as the temperature increases from 10°C to 30°C. Give the answer in mL O₂/g/h/°C to the nearest tenth.
To estimate the size of an animal population, researchers often use a method known as mark-recapture, which involves marking individuals from a large population for easy identification upon recapture. The mark-recapture method assumes that the proportion of marked individuals in the recapture group is equal to the proportion of marked individuals in the entire population.

Researchers used the mark-recapture method to estimate the number of individuals in a population. Using the results presented in the table below, estimate the total number of individuals in the population. Give your answer to the nearest whole number.

<table>
<thead>
<tr>
<th>Number of Marked Individuals</th>
<th>Total Number of Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recapture group</td>
<td>14</td>
</tr>
<tr>
<td>Entire population</td>
<td>180</td>
</tr>
</tbody>
</table>

A certain species of plant has four unlinked genetic loci, W, X, Y, and Z. Each genetic locus has one dominant allele and one recessive allele. For a plant with the genotype WwXxYyZz, what is the probability that the plant will produce a gamete with a haploid genotype of WXYZ? Give your answer as a fraction or as a value between 0 and 1, to four decimal places.
The enzyme phosphofructokinase (PFK) is an allosterically regulated enzyme that catalyzes the following reaction.

Fructose-6-phosphate + ATP $\rightarrow$ Fructose-1,6-bisphosphate + ADP

The graph below shows that at certain concentrations ATP inhibits the enzyme, whereas AMP activates it. According to the information presented in the graph, when the concentration of fructose-6-phosphate is 0.5 mM, how many times more active is PFK in cells with 1 mM ATP + 0.1 mM AMP than in cells with 5 mM ATP? Express your answer to the nearest whole number.