Quiz 1 Due Sept 5/6

Name

By placing my name on this page, I guarantee that the answers provided below represent my own work.

Goal: review what you learned about the microscope, and prepare to learn about scientific sampling and significance testing.

1. You’ve lost your eyeglasses. Your field of vision is blurred because the lenses of your glasses
   d. increase magnification
   e. increase illumination
   f. increase resolution
   g. all of the above
   h. none of the above, they just make you look cool

2. Identify A1 and A2 and state what they do.

A1________________________

A2________________________

3. If you used a 40X objective lens in the microscope in question 2, what would be your total magnification?
4. You want to study how the application of fertilizer influences dandelion growth in your back yard. You divide your backyard into two equal plots and fertilize only one plot.
   a. State the test hypotheses for your experiment:

   b. Which plot is your treatment and which plot is your control? Why?

   After 4 weeks, you randomly choose 6 locations within each plot and count the number of plants within a square meter. This is your information:

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Unfertilized</th>
<th>Fertilized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average #plants per squared meter</td>
<td>27.1</td>
<td>30.8</td>
</tr>
<tr>
<td>Significance: p=0.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   c. What is your qualitative variable in this data set?

   d. What is another term for “Average count per square meter”?

   e. Your dependent variable in this experiment is____________________

   Your independent variable in this experiment is __________________

   f. Describe what you might do to randomly find your plots

   g. Do you accept or reject your hypothesis? Why?

   h. What do you conclude?