Use the information in the following setting to answer questions 1 and 2

We expect based on Mendelian genetics that if we breed two plants that have a Bb genotype (B is dominant purple flower, b is recessive white flower) that the offspring will have a ratio of 3 purple flowers for every 1 white flower. In a sample of 87 offspring, we get 58 purple flowers and 29 white flowers.

<table>
<thead>
<tr>
<th>Color</th>
<th>$O_i$</th>
<th>$E_i$</th>
<th>$O_i - E_i$</th>
<th>$(O_i - E_i)^2$</th>
<th>$(O_i - E_i)^2/E_i$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purple</td>
<td>87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Finish filling in the above table.

2) Test the 3:1 ratio claim at the 0.10 level.

Step 1

Step 2

Step 3
Continue with the rest of the hypothesis test even if the assumptions do not hold.

Step 4

Step 5

Step 6

Step 7