Hints on Assignment 1

Part 1: Summarizing Data

In the second part:

SAS Users: Run PROC MEANS 4 times (once per factor) e.g.:

PROC MEANS; CLASS GROWAREA; VAR FLAVOR; RUN;
PROC MEANS; CLASS HOLDTEMP; VAR FLAVOR; RUN;
…

EXCEL USERS: See the documents at http://www.stat.ufl.edu/~winner/sta6166.html

OBTAINING SUMMARY STATISTICS AND PLOTS BY GROUPS (FACTOR LEVELS) IN EXCEL

In the fifth part:

SAS Users: Run PROC MEANS with both factors in the CLASS statement:

PROC MEANS; CLASS HOLDTEMP COOKMETHOD; VAR FLAVOR; RUN;

Then I would suggest entering those means in EXCEL and mimic example on Slide 12 of: SUMMARY STATISTICS, SIMPLE PLOTS in SAS, EXCEL, JMP

EXCEL Users: See the document on my website:
OBTAINING SUMMARY STATISTICS AND PLOTS BY GROUPS (FACTOR LEVELS) IN EXCEL

Part 2: Probability

I would suggest doing this in EXCEL (this is cells A1:H6 of my spreadsheet)

<table>
<thead>
<tr>
<th>COL A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GROWAREA</td>
<td></td>
<td>HOLDTEMP</td>
<td>Size</td>
<td>StorTime</td>
<td>CookType</td>
<td>Texture</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2.9</td>
<td>3.2</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2.3</td>
<td>2.5</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2.5</td>
<td>2.8</td>
<td>2.8</td>
</tr>
</tbody>
</table>
You can obtain probabilities by creating new columns that contain 1's and 0's, depending on whether the criterion is met.

**In the first part:**

In cell I2, type:  
=IF(F2>=3,1,0)  
Then COPY/PASTE that cell to cells I3:I161  
Note that this command says that if this row’s flavor score is ≥ 3, then assign a 1, otherwise assign 0.

Then obtain the probability by typing (in say cell I165):  
=SUM(I2:I161)/COUNT(I2:I161)

**In the third part**

You need to count the number of cases in the intersection and divide by the number of cases in the conditioning event.

First, create a column (say column K) that contains 1’s and 0’s depending on whether or not both events occurred.

In Cell K2, type:  
=IF(AND(A2=1,H2>3.0),1,0)  
Then COPY/PASTE that cell to cells K3:K161

Second, you could create a column (say column L) that contains 1’s and 0’s depending on whether or not the conditioning event occurred (Column A is equal to 1). Alternatively, you can use the COUNTIF function.

Then obtain the conditional probability by typing (in say cell K165):  
=SUM(K2:K161)/COUNTIF(A2:A161,“=1”)