\_\_\_\_\_ Group Members:\_\_\_\_\_

Group Name: \_\_\_\_\_

## What is Typical?

## Part I: Making Predictions

For each of the following variables measured on the Student Survey (your section), make a prediction for a typical value for all students enrolled in your statistics class this term. A typical value is a single number that summarizes the class data for each variable.

1. Write that prediction in the *First Prediction* column.

Attribute from Student Survey	First	Revised	Statistics from StatCrunch				
Attribute from student survey	Prediction	Prediction	Mean	Median			
Age							
Credit hours this semester							
Number of states visited							
Height							
Number of siblings							
Hours a week spent studying							
Hours a week spent working at a paying job							

Open MyMathLab and click on the StatCrunch link in the menu on the left. Click on the link "Stat Crunch Website,"



View the data sets from your textbook in StatCrunch.

Visit the StatCrunch website to perform complex analyses with the StatCrunch statistical software, search shared data sets, take online surveys, and more.

then "My Groups." Click on our group, then under the "Preview Data," click on "Class data."

- 2. Now use *StatCrunch* to create dot plots of each variable to see if your original predictions seem reasonable. Based on the dotplots, make revised predictions for the typical value for each of the variables.
- 3. To make a dot plot in *StatCrunch*, click on the **Graph** button at the top of the spreadsheet, choose Dotplot.

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3	m	72	180	180	20	65	n			
4	m	70	177	177	19	120	n			
5	m	71								

4. Choose the column of interest, label the axes, then click on "Compute!" at the bottom of the page.



5. Write these new predictions in the *Revised Prediction* column in the table.

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## Part II: Test Your Conjectures

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Use StatCrunch to find the mean and median for each of these variables. (Follow the directions below.)

1. Click the Stat button.

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3	m	72	180	180	20	65	n	
4	m	70	177	177	19	120	n	
5	m	71						

2. Click on "Summary Stats," then "Columns." Choose the columns of interest. You can select more than one by holding down the Ctrl key on your keyboard.

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15	m	68	133	13	33	19	180	n		15	m		68	133	1	133	19	180	n	
16	f	64	115	11	15	18	125	110		16	f		64	115	1	115	18	125	110	
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6. How close were your *revised predictions* to the "typical" values produced in *StatCrunch*? For which attributes were your predictions most accurate?

- 7. What was most surprising to you? Why?
- 8. In general, were your revised predictions closer to the means or medians?

## **Things to Consider**

- How close were your predicted typical values?
- Which measure of center were your guesses closer to, the mean or median?
- What information do means and medians tell us about a distribution?
- How do we decide whether to use the mean or median to summarize a data set?
- In statistics, what do we mean by what is typical?