Data Analysis

The table below shows the salary structure of two departments in a hypothetical university.

	Physics		English	
	professors	salary	professors	salary
Women	1	$100K	8	$50K
Men	9	$90K	2	$40K

a) What is the average (mean) salary of the professors? Of the women professors? Of the men?

b) Answer the same questions for the median.

c) Answer the same questions for the mode.

d) Write a few sentences to convince someone that men in this university are paid better than women. Then write a few sentences to convince someone of just the opposite.

Create an Excel spreadsheet and put the following numbers in the first column.

14 15 22 50 0 33 16 18 23 40 47

a) Use Excel to find the mean, median, and mode of these numbers.

b) Change the first number from 14 to 23. How do the Excel calculations change?

c) Click the "undo" button and confirm that Excel reverts back to the original set of numbers.

d) Change the last four numbers to 0 so that the data now read

14 15 22 50 0 33 16 0 0 0 0

How do the different averages change? Explain how the data are skewed.