Stat 1350, Quiz #7, Fall 2014   Name _____ KEY _____

Instructions: Answer each question completely. Show all work for any computational questions.

1. Create a box plot of the data below using the following steps:
   - I.   Find the median (the list is already sorted)
   - II.   Find the first and third quartiles.
   - III.   List the maximum and minimum values.
   - IV.   Use this information to draw the box plot.
   - V.   Replicate this graph in your calculator to determine whether there are any outliers.

15	21	34	35	35	39	42	44	46	46
47	47	48	53	54	55	56	60	67	69
70	72	73	79	88	89	94	99		

median = 53.5

$Q_1 = 43$

$Q_3 = 71$
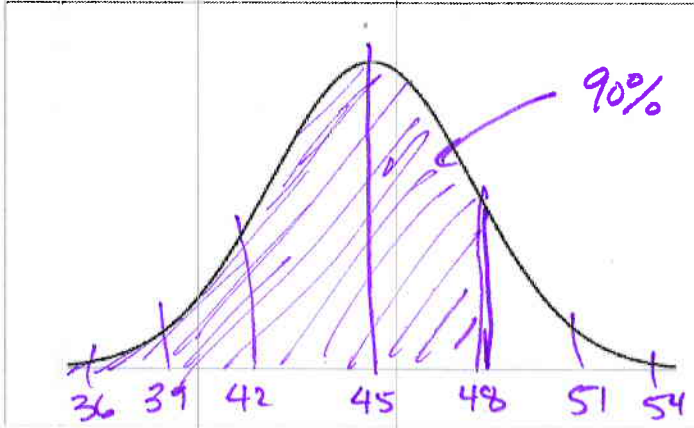
Min = 15

Max = 99
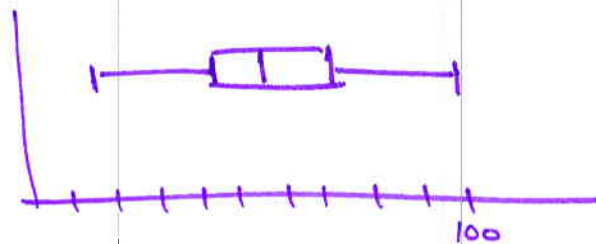
no outliers

2. Calculate the mean and the standard deviation of the same data set in #1. Is the mean to the right or left of the median (or is it approximately the same)? You may use your calculator rather than computing these values by hand, but if you do, say which calculator commands you used.

mean $\bar{x} = 56.32$ 1-VarStats

$S = 21.36$

3. On the normal curve below, graph the 68-95-99.7 rule. Be sure to label the mean, standard deviations, and percentages contained in each region.

-3 -2 -1 mean 1 2 3
            0

68%

95%

99.7%
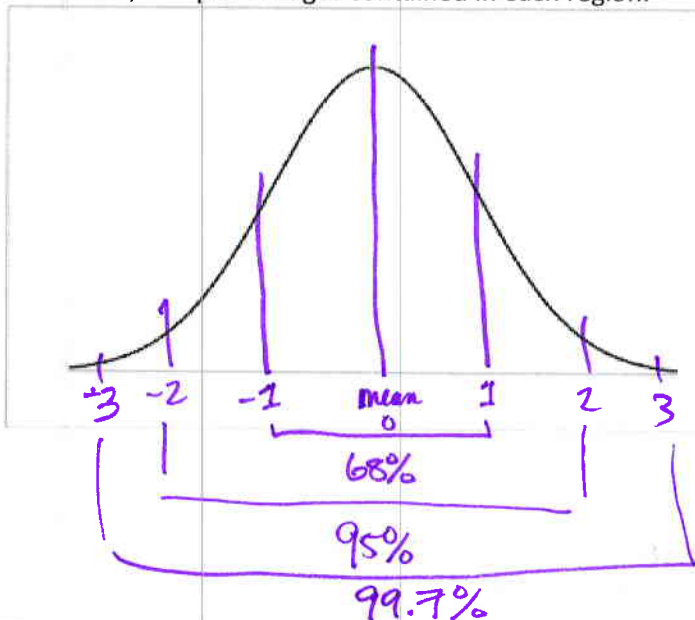
4. If the mean of a normal distribution is 45, with a standard deviation of 3. Find the value that is larger than 90% of all the other values in the distribution. Draw the region on the graph of the normal curve below and shade appropriately.

90%

36 39 42 45 48 51 54

inv Norm (.90, 45, 3) = 48.84