

Lab 1 – Ch.3 – Descriptive Statistics and the Shape of Distributions
 Critical Thinking; Communication Skills; Empirical/Quantitative Skills

Data Set 1: A study was performed on the number of armored plates found on stickleback fish. A random sample of 40 stickleback fish showed the following number of plates:

42	64	62	9	12	62	50	12	27	11
69	64	63	21	49	62	43	65	51	62
12	21	62	62	66	9	64	12	63	10
54	21	61	9	14	63	45	57	60	62

Data Set 2: A random sample of 25 healthy adults resulted in the following body temperatures:

98.5	98.6	97.8	98.9	97.9	99	98.2	98.7	98.8	99
98	99.2	99.5	99.4	98.3	99.1	98.4	97.6	97.4	97.7
97.5	98.8	98.6	99.3	98.4					

1. For each of the data sets, calculate the mean and median.

	Mean	Median
Data Set 1 (plates)		
Data Set 2 (temp)		

2. **Based ONLY on the mean and median**, what is the most likely distribution (shape) of each data set? Justify your choices using complete sentences and proper grammar. Write your justification below.

3. Construct a stem-and-leaf plot for each data set. (do not separate values with commas)

NUMBER OF ARMORED PLATES ON STICKLEBACK FISH

5 | 2 means 52

Stem	Leaves

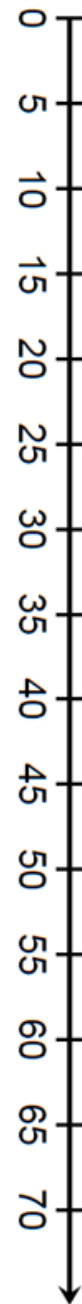
BODY TEMPERATURES

95 | 2 means 95.2

Stem	Leaves

4. **Based ONLY on the stem and leaf plots**, what is the most likely distribution (shape) of each data set? Justify your choices using complete sentences and proper grammar. Write your justification below.

5. Write the 5-number summary then construct a boxplot for EACH data set.



NUMBER OF ARMORED PLATES ON STICKLEBACK FISH

Min = _____ Q_1 = _____ Q_2 = _____ Q_3 = _____ Max = _____



BODY TEMPERATURES

Min = _____ Q_1 = _____ Q_2 = _____ Q_3 = _____ Max = _____

6. **Based ONLY on the box plots**, what is the most likely distribution (shape) of each data set? Justify your choices using complete sentences and proper grammar. Write your justification below.