

Name: _____ Date: _____

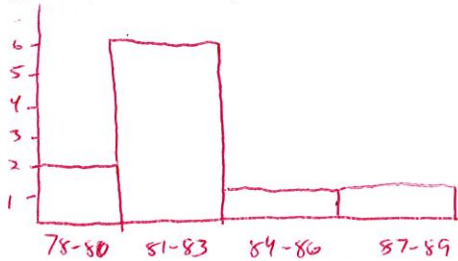
Graphical Displays for Data Homework

Dr. Singh is a veterinarian. He records the weights of each pet. The weights of 10 German shepherds, all 4-year-old males, are in the table below, rounded to the nearest pound. Use this information to solve problems 1-5.

Weight in pounds
80
78
82
84
81
89
83
81
81
82

2 6 1 1

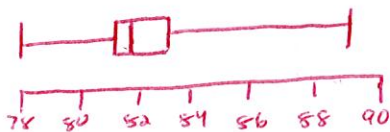
1. Create a histogram showing the weights of Dr. Singh's German shepherds.



2. Find the minimum, maximum, first quartile, and third quartile of the data set.

- a. Minimum: 78
- b. Maximum: 89
- c. First Quartile: 81
- d. Third Quartile: 83

3. Create a box plot showing the weights of the German shepherds.



4. Find the interquartile range of the data. Are there any outliers?

$IQR = 83 - 81 = 2$

$81 - 1.5(2) = 78$

$83 + 1.5(2) = 86$

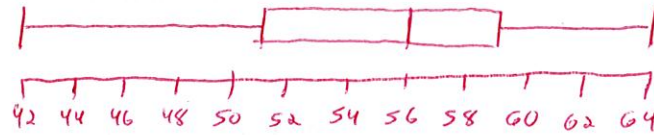
Yes, 89.

5. Dr. Singh wants to analyze the weights of the German shepherds. He wants to understand the center and spread of his data, so that he has a better idea of an expected weight for a 4-year-old male German shepherd. Which graph would be most useful to Dr. Singh? Explain.

Varies. I like dot plots.

Example 4: A company keeps track of the age at which employees retire. It is considered an early retirement if the employee retires before turning 65. The age of the 11 employees who took early retirement this year are listed in the table below. Draw a box plot for the data. Are there any striking deviations in the data? *42, 51, 56, 59, 64*

Employee	Age at early retirement
1	56
2	55
3	60
4	51
5	53
6	58
7	56
8	64
9	59
10	42
11	48



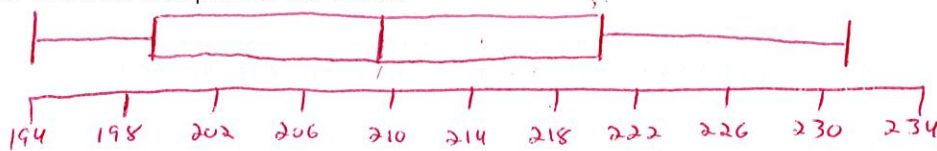
$51 - 1.5(8) = 39$
 $59 + 1.5(8) = 71$ *No.*

Example 5: Elizabeth records her scores each time she goes bowling. The scores from her last 13 games are in the table below.

Game	Score
1	206
2	210
3	198
4	209
5	194
6	200
7	216
8	212
9	196
10	224
11	228
12	231
13	207

194, 199, 209, 220, 231

Construct a box plot of her data.



Find the IQR. $220 - 199 = 21$

Are there any outliers? $199 - 1.5(21) = 167.5$
 $220 + 1.5(21) = 251.5$ *No*