4.3 Boxplots and IQR

PRACTICE

1. Find the 5-number summary and interquartile range for each set of data.

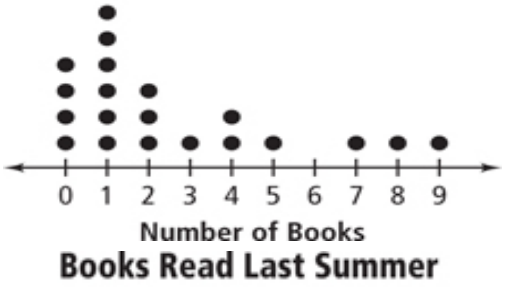
   a. {9, 11, 15, 17, 23, 24, 33, 33, 38, 38, 45, 46, 51}

   b. {20, 25, 30, 32, 35, 40, 40, 43, 44, 46, 47, 51, 57, 60}

   c. {47, 43, 35, 34, 32, 21, 17, 16, 11, 9, 5, 5}

2. Use the dotplot to create a boxplot. Plot the Boxplot on the same axis above the dotplot.

← Plot your boxplot here, using the dotplot's number line.



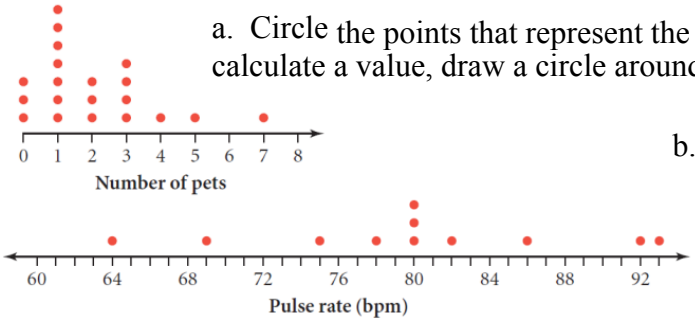
5 # Summary				
Min =	1Q =	Median =	3Q =	Max =

a. What percent of the students read between 1 and 9 books last summer?

b. The middle 50% of students read how many books?

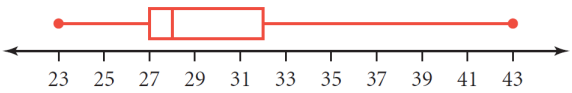
c. The top 25% of students read between how many books?

3. a. Circle the points that represent the 5# summary values. If 2 points are needed to calculate a value, draw a circle around both points.



b. List the 5-number summary for each data set.

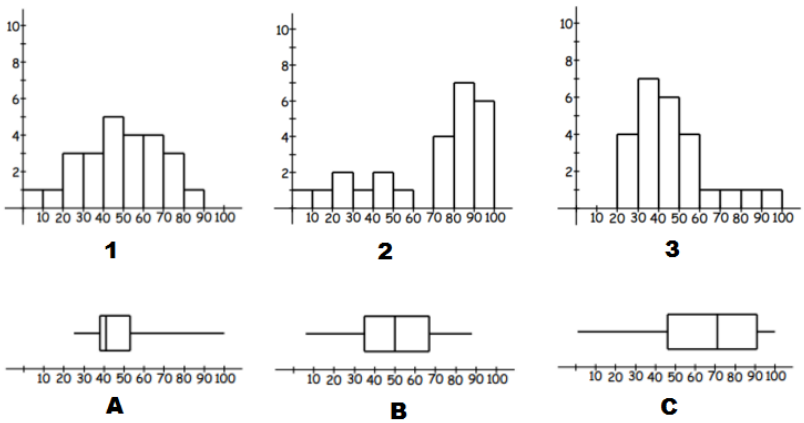
4. Which data set matches this box plot? (More than one answer may be correct.)



a. {23, 25, 26, 28, 28, 28, 28, 30, 31, 33, 41, 43}
b. {23, 23, 24, 25, 26, 27, 29, 30, 31, 33, 41, 43}
c. {23, 27, 28, 28, 33, 43}
d. {23, 27, 28, 28, 29, 32, 43}

5. Describe the boxplot above as skewed left, symmetric, or skewed right and tell why.

6.



Histogram #1 Matches Boxplot _____

Histogram #2 Matches Boxplot _____

Histogram #3 Matches Boxplot _____

7. Draw a boxplot and find the interquartile range for each of the following sets of data:

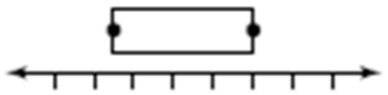
a. Shoe size: {6.5, 7, 8.5, 7, 10, 7.5, 10, 5.5, 7.5, 5, 8.5, 10.5, 9, 12, 8.5, 9}

b. Games in the World Series: {5, 7, 5, 7, 6, 6, 7, 7, 6, 5, 7, 7, 6, 5, 7}

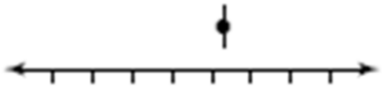
c. Number of Words in Book Title {2, 6, 4, 5, 4, 3, 1, 3, 3, 6, 2, 1, 1, 4, 1}

8. The following boxplots are called "Beanplots" because they look weird and freak people out. Describe the relationships between the numbers in the five number summaries for each plot:

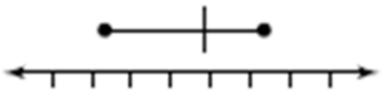
a.



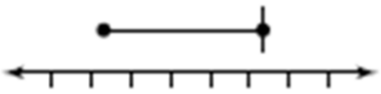
b.



c.



d.



SMP #2

9. Multiply: $(2x-1)^2$

10. Solve the following equation for w: $t+\frac{1}{2}w=\frac{r}{x}$

11. Solve the following system: $\begin{cases}-2x-y=3\\2x+2y=-8\end{cases}$