4-4-19

Aim: SWBAT continue to interpret data displayed as dot plots and box plots.

HW: Packet Pages 17 - 18
        Test Next Friday

Do Now: Packet Page 16 #1

HOMEWORK

The tables show the quiz scores in two 7th grade Social Studies classes.

Class A			
9	8	8	9
10	9	8	10
9	9	10	

Class B			
9	10	8	10
10	9	10	6
5	7	8	10

| Class A	Class B
Mean $\dfrac{8+8+8+9+9+9+9+9+10+10+10}{11}$ → $\dfrac{99}{11} = 9$	**Mean** $\dfrac{5+6+7+8+8+9+9+10+10+10+10+10}{12}$ → $\dfrac{102}{12} = 8.5$
Median 8, 8, 8, 8, 8, ⑨ 9, 9, 10, 10, 10	**Median** 5, 6, 7, 8, 8, [8, 9] 10, 10, 10, 10, 10 $\dfrac{9+9}{2}$ → 9
Mode 9	**Mode** 10

6. Which best describes the comparison between the mode quiz scores?

   A) The modes are the same.

   B) The mode score for Class A is 2 points higher than for Class B.

   C) The mode score for Class A is 1 point higher than for Class B.

   (D) The mode score for Class A is 1 point lower than for Class B.

7. Which best describes the comparison between the mean quiz scores?

   E) The means are the same.

   (F) The mean score for Class A is 0.5 points higher than for Class B.

   G) The mean score for Class A is 1 point higher than for Class B.

   H) The mean score for Class A is 1 point lower than for Class B.

1. Use the data set to answer the following questions. $[2, 8, 5\ 6,\ 8,\ 10,\ 23]$

    a. What is the median of the data? _____6_____

    b. What is the first quartile of the data? _____3_____

    c. What is the third quartile of the data? _____10_____

    d. What is the range of the data? 23 - 2 = 21

    e. What is the IQR of the data? 10 - 3 = 7

    f. Are there any outliers in this data set? yes If so, what are they? _____23_____

    g. What would the range be without the outlier? 10 - 2 = 8

2. The box plot below shows the ages of Mr. Morehouse's grandchildren.

    Ages of Grandchildren
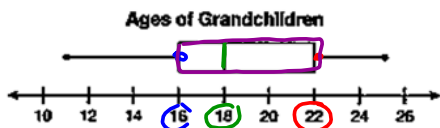
    a. Find the median of their ages. _____18_____

    b. Find the first quartile of their ages. _____16_____

    c. Find the third quartile of their ages. _____22_____

    d. Find the interquartile range. 22 - 16 = 6

3. The double box-plot below shows the number of points scored in games by two basketball players on the same team.

    Points Scored in Games
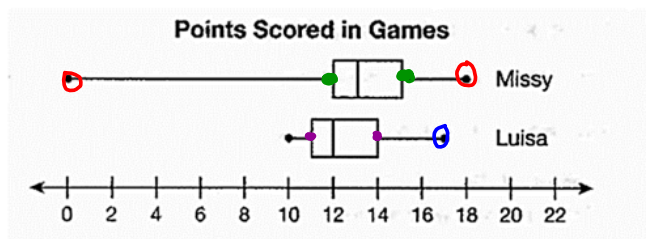
	Missy	Luisa
Range	18 - 0 = 18	17 - 10 = 7
IQR	15 - 12 = 3	14 - 11 = 3

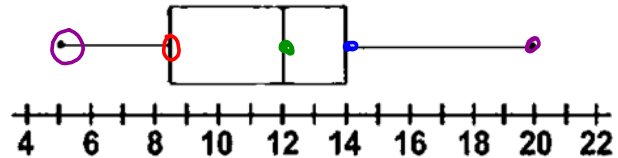   Who scores more consistently?
    Luisa more consistently scores ; her range is much smaller.

Aim: SWBAT construct dot plots, box plots (aka box-and-whisker plots), frequency tables, and histograms.

Do Now: Complete questions 1 - 3.

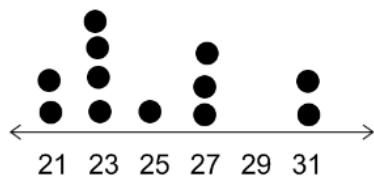1) Examine the box plot and determine the following values.

Minimum: ___5___

Quartile 1: ___8.5___

Median: ___12___

Quartile 3: ___14___

Maximum: ___20___

Interquartile Range: ___14 - 8.5 = 5.5___

2) Use the dot plot to create a numerical list. Determine the following values.

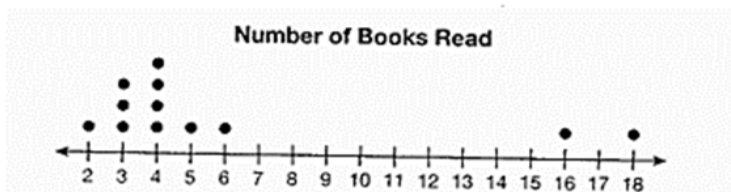List the data: ___21, 21, 23, 23, 23, 23, 25, 27, 27, 27, 31, 31___
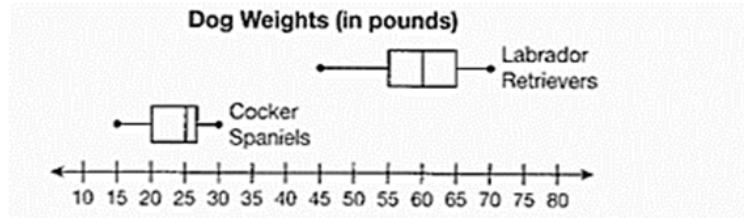
Mean →

Median: _____

Mode: ___23___

Range: ___31 - 21 = 10___

3) Use the dot plot to determine which measure of central tendency best describes the data.

Number of Books Read

HOMEWORK

The double box plot below shows the weights, in pounds, of Labrador Retrievers and Cocker Spaniels from a veterinarian's office.

Which type of dog shows greater variability in weight?

Dog Weights (in pounds)

1) The least weight for the Cocker Spaniel is _____ pounds.

2) The greatest weight for the Cocker Spaniel is _____ pounds.

3) Find the range of the Cocker Spaniels' weights. _____ - _____ = _____ pounds

4) The third quartile weight for the Cocker Spaniel is _____ pounds.

5) The first quartile weight for the Cocker Spaniel is _____ pounds.

6) Find the IQR for the Cocker Spaniels' weights: 27 – _____ = _____

7) The IQR for the weights of the Cocker Spaniels is _____ pounds

8) The least weight for the Labrador Retrievers is _____ pounds.

9)   The greatest weight for the Labrador Retrievers is _____ pounds.

10) Find the range of the Labrador Retrievers' weights. _____ - _____ = _____ lbs

11) The third quartile weight for the Labrador Retrievers is _____ pounds.

12) The first quartile weight for the Labrador Retrievers is _____ pounds.

13) Find the IQR for the Labrador Retrievers' weights: _____ – _____ = _____

14) The IQR for the weights of the Labrador Retrievers is _____ pounds

15) The range and the IQR for Cocker Spaniels are _____ than for Labrador Retrievers.

Conclusion: _____ have greater variability in weight than

_____.

Use the dot plot to answer questions 16 & 17.
The dot plot shows the grades that a class of students
received on their Social Studies homework assignment.

Homework Assignment Grades

75 80 85 90 95 100
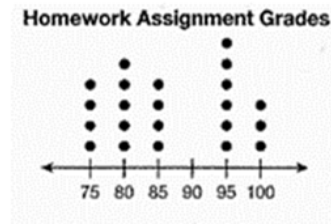
16) What is the first quartile grade?

   A) 75   B) 80   C) 85   D) 90

17) What is the third quartile grade?

   E) 85   F) 90   G) 95   H) 100

Use the dot plot to answer questions 18 & 19.
The double box plot shows the vocabulary quiz scores
for Mr. Edelman's first and second period classes.

Quiz Scores

70   80   90   100
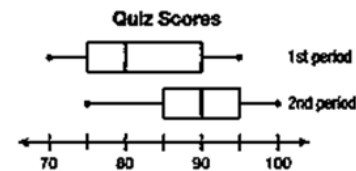
18) What is the interquartile range of first period's quiz scores?

   A) 5   B) 10   C) 15   D) 20

19) Which statement is true about the quiz scores?

   E) The range of the scores is the same for both classes.

   F) The interquartile range of the scores was the same for both classes.

   G) The median score was the same for both classes.

   H) About 25% of the students in both classes scored 95% or higher on the quiz.

Miles Run Per Week

20) The box-and-whisker plot shows the number of
miles run per week by the members of the running club.
What is the range of the data?

0   3   6   9   12   15   18   21
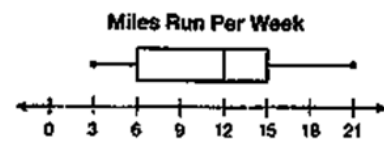
   A) 9 miles   B) 12 miles   C) 15 miles   D) 18 miles

21) The box-and-whisker plot shows the ages of
the participants in a park clean-up. What is the
interquartile range of the ages in years?

**Ages of Clean-Up Participants
(in years)**

12 16 20 24 28 32 36 40 44

   A) 12   C) 20
   B) 16   D) 32