

4-2-19

Aim: *SWBAT* analyze and compare the measures of central tendency from two populations of data.

[HW: Packet Page 13](#)

Do Now: Packet Page 12

HOMEWORK

Students in Mrs. Becker's class and Mr. Rolland's class sold boxes of popcorn for a school fundraiser. The tables below show the number of boxes that each student sold.

Popcorn Boxes Sold

Mrs. Becker's Class			
5	8	76	15
16	84	7	12
17	11	13	

Mr. Rolland's Class			
9	10	12	20
8	34	6	27
14	10	3	51

Mrs. Becker's Class	Mr. Rolland's Class
Mean $\frac{5+7+8+11+12+13+15+16+17+76+84}{11}$ $\rightarrow \frac{264}{11} = 24$	Mean $\frac{3+6+8+9+10+10+12+14+20+27+34+51}{12}$ $\rightarrow \frac{204}{12} = 17$
Median 5, 7, 8, 11, 12, 13, 15, 16, 17, 76, 84 $\frac{10+12}{2} \rightarrow \frac{22}{2} = 11$	Median 3, 6, 7, 8, 9, 10, 10, 12, 14, 20, 27, 34, 51 $\frac{10+12}{2} \rightarrow \frac{22}{2} = 11$
Mode NO MODE	Mode 10

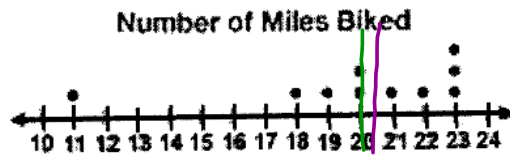
- The mean for Mrs. Becker's class is greater than the mean for Mr. Rolland's class.
- The median for Mrs. Becker's class is greater than the median for Mr. Rolland's class.
- Why can't we compare the modes? Mrs. Becker's class has no mode so a comparison is not possible.

Conclusion: The average number of boxes sold by Mrs. Becker's students was greater than the average number sold by Mr. Rolland's students.

Aim: SWBAT analyze and compare the measures of central tendency from two populations of data.

Do Now: Use the dot plot to answer questions 1 - 4.

The dot plot shows the number of miles Jamal biked per week for 10 weeks.



1. What is the mean number of miles that Jamal biked per week?

$$\frac{11 + 18 + 19 + 20 + 20 + 20 + 21 + 22 + 23 + 23 + 23}{10} = \frac{200}{10} = 20$$

2. What is the median number of miles that Jamal biked per week?

$$11, 18, 19, 20, 20, 20, 21, 22, 23, 23, 23 \quad \frac{20 + 21}{2} \rightarrow 20.5$$

3. How many miles did Jamal bike most often?

23

4. Which measures of central tendency best represents the average number of miles that Jamal bikes per week?

A) mean or mode

C) median or mode

B) mean or median

D) mean, median or mode

5. Explain your answer to question #4. (justify your answer)

The mode would not represent the central tendency and choice B does not include it. In addition, the mean and median are very close so either could represent the average number of miles Jamal bikes per week.

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	Mean
Median	Median
Mode	Mode

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.