

State whether the data in sets A and B represent *sample* or *population* data. Then find the range, variance, and standard deviation of each set. Use the standard deviations to compare the variability between the data sets.

4.

Wait Times (min)					
Ride A			Ride B		
45	22	40	35	50	32
48	11	51	31	35	45
36	55	60	45	49	40
32	24	37	43	37	45

5.

Number of Sponsors Obtained by Participants					
Charity Walk A			Charity Walk B		
44	14	61	8	28	15
22	27	25	100	42	19
38	50	49	25	75	82

6.

Number of Days Each Student Missed This Year														
Class A														
10	8	5	9	7	3	6	8	14	11	8	4	7	8	2
5	13	0	15	9	7	9	10	9	11	14	8	12	10	1
Class B														
5	8	13	7	9	4	10	2	12	9	6	11	3	8	5
12	6	7	8	11	12	8	9	3	10	5	13	9	1	8

Find the minimum, lower quartile, median, upper quartile, and maximum of each data set. Then interpret this five-number summary.

7.

Number of Students in Each Math Class at Central High														
25	27	26	26	19	27	24	23	19	28	25	24	20	22	22
24	26	18	28	29	29	26	24	24	23	23	25	25	29	28

8.

State Mean ACT Scores									
20.2	21.3	21.5	20.4	21.6	20.3	22.5	21.5	17.8	20.5
20.0	21.7	21.3	20.2	21.6	22.0	21.6	20.3	19.8	22.6
20.8	22.4	21.4	22.2	18.8	21.5	21.7	21.2	22.5	21.2
20.1	22.3	20.3	21.2	21.4	20.6	22.5	21.8	21.9	19.3
21.5	20.5	20.3	21.5	22.7	20.9	22.5	22.2	21.4	20.7

Identify any outliers in each data set, and explain your reasoning. Then find the mean, median, mode, range, and standard deviation of the data set with and without the outlier. Describe the effect on each measure.

- fuel efficiency in miles per gallon of 15 randomly selected automobiles:
40, 36, 29, 45, 51, 36, 48, 34, 36, 22, 13, 42, 31, 44, 32, 34
- number of posts to a certain blog each month during a particular year:
25, 23, 21, 27, 29, 19, 10, 21, 20, 18, 26, 23
- CEREAL** The weights, in ounces, of 20 randomly selected boxes of a certain brand of cereal are shown.
16.7, 16.8, 15.9, 16.1, 16.5, 16.6, 16.5, 15.9, 16.7, 16.5,
16.6, 14.9, 16.5, 16.1, 15.8, 16.7, 16.2, 16.5, 16.4, 16.6
 - Identify any outliers in the data set, and explain your reasoning.
 - If the outlier was removed and an additional cereal box that was 17.35 ounces was added, would this value be an outlier of the new data set? Explain.
 - What are some possible causes of outliers in this situation?

