

TEST NAME: **NAMSIM11314S-ID.2**
TEST ID: **130069**
GRADE: **09**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

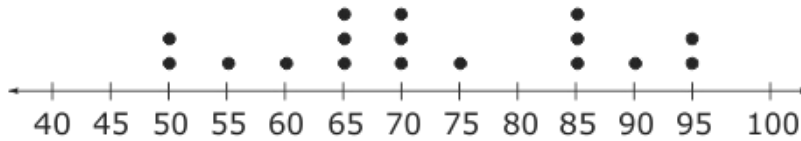
Student: _____

Class: _____

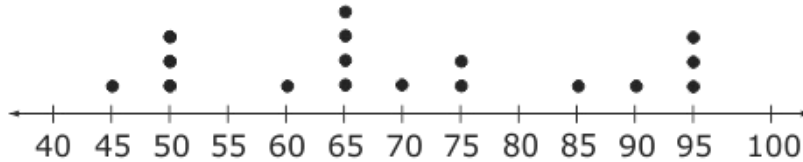
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1. Mr. Allen created the dot plots below using the test scores from chapter 1 and chapter 2.

Scores on Mr. Allen's Chapter 1 Test



Scores on Mr. Allen's Chapter 2 Test



Which statement is true?

- A. The mean of the chapter 1 test scores is greater than the mean of the chapter 2 test scores.
- B. The mean of the chapter 1 test scores is the same as the mean of chapter 2 test scores.
- C. The median of the chapter 1 test scores is less than the median of the chapter 2 test scores.
- D. The median of the chapter 1 test scores is the same as the median of the chapter 2 test scores.

2. The table below shows the high temperature each day for four weeks during the month of July.

High Temperatures in July

Week 1	88	93	96	95	89	76	98
Week 2	85	85	92	94	81	86	88
Week 3	92	91	93	84	85	80	80
Week 4	88	87	90	89	88	85	89

Which week had the lowest mean temperature?

- A. Week 1
 - B. Week 2
 - C. Week 3
 - D. Week 4
3. The table below shows amounts customers spent at Michael's Shoe Store over a two-day period. The mean for both days was the same.

Michael's Shoe Store Sales

Day 1	Day 2
\$96	\$110
\$80	\$98
\$100	\$110
\$110	\$100
\$90	\$85
\$140	\$140
\$92	\$98
\$145	\$80
\$70	\$75
\$120	?

What is the missing value for day two?

- A. \$98
- B. \$120
- C. \$147
- D. \$157

4. Two data sets are shown below.

Set 1: 54, 68, 68, 70, 73, 79, 84, 90, 96, 100

Set 2: 66, 68, 68, 70, 72, 80, 85, 98, 99, 100

Which statement is true about the data sets?

- A. The median of Set 1 is greater than the median of Set 2.
 - B. The median of Set 1 is less than the median of Set 2.
 - C. The mean of Set 1 is greater than the mean of Set 2.
 - D. The mean of Set 1 is less than the mean of Set 2.
5. Jim and Carol recorded gas prices at five stations for their own towns in the table below.

Gas Prices

Name	Station 1	Station 2	Station 3	Station 4	Station 5
Jim	\$3.45	\$3.54	\$3.71	\$3.62	\$3.49
Carol	\$3.89	\$3.65	\$3.39	\$3.48	\$3.49

Which person's town had the lower mean for gas prices and by **about** how much?

- A. Jim, by \$0.02
- B. Carol, by \$0.02
- C. Jim, by \$0.06
- D. Carol, by \$0.06

6. Two schools each sent a four-member team to compete in a one-lap swim competition. The table below lists the number of minutes each swimmer took to swim one lap.

Team A	
Swimmer	Time (in minutes)
1	2.11
2	1.89
3	1.90
4	2.06

Team B	
Swimmer	Time (in minutes)
1	1.88
2	1.96
3	2.23
4	1.78

What was the faster team's mean, one-lap swimming time and which team does that time belong to?

- A. 1.99 minutes; Team A
 - B. 1.99 minutes; Team B
 - C. 1.96 minutes; Team A
 - D. 1.96 minutes; Team B
7. The table below shows the scores of two classes on a science project.

Class A	Class B
78	65
65	78
90	80
77	76
88	70
80	65
94	81
89	78
75	73
80	80

What is the difference between the two classes' mean scores?

- A. 3
- B. 4
- C. 7
- D. 13

8. The high temperatures, in degrees Fahrenheit, of several cities were recorded below over a 4-day period.

Monday	Tuesday	Wednesday	Thursday
72, 73, 79, 57, 63, 61, 87	70, 67, 79, 55 67, 65, 89	67, 71, 84, 55, 68, 67, 87	65, 73, 81, 54, 69, 65, 85

Which day had the greatest mean temperature?

- A. Monday
 - B. Tuesday
 - C. Wednesday
 - D. Thursday
9. The data below represents the number of minutes Jake and Sarah spent doing chores each day for a week.

Jake: 80, 85, 90, 90, 90, 95, 98

Sarah: 75, 80, 80, 90, 92, 94, 95

Which statement is true about the data?

- A. The median number of minutes for Jake is higher than the median number of minutes for Sarah.
- B. The mean number of minutes for Sarah is higher than the mean number of minutes for Jake.
- C. The mean number of minutes for Jake and Sarah are equal, but the median number of minutes are different.
- D. The median number of minutes for Jake and Sarah are equal, but the mean number of minutes are different.

10. Mrs. Bowen asked students in her class the average number of minutes each person spent reading each night. The results are recorded below.

Girls	43	27	20	28	32	25	35	22	30	42
Boys	35	20	21	25	26	10	15	12	15	45

What is the **approximate** difference between the standard deviation of boys' and girls' reading times?

- A. 3
 - B. 8
 - C. 9
 - D. 11
11. The data sets show the test scores of a group for the last two tests.

Test 1: {75, 75, 85, 80, 65, 70, 65}
Test 2: {95, 85, 85, 90, 90, 95, 100}

Which data set had the smaller standard deviation?

- A. Test 1 with a standard deviation of 7.5
- B. Test 2 with a standard deviation of 7.5
- C. Test 1 with a standard deviation of 5.6
- D. Test 2 with a standard deviation of 5.6

12. There are 4 voting regions in the town of Pleasantville. The chart below shows the numbers of people registered as Democrats, Republicans, or Independents.

Pleasantville Voter Registrations

Voting Region	Democrat	Republican	Independent
1	420	316	270
2	336	338	322
3	214	369	451
4	195	188	175

Which statement is true?

- A. The median number of Democrats in a region is greater than the median number of Republicans in a region.
 - B. The median number of Republicans in a region is greater than the median number of Democrats in a region.
 - C. The median number of Republicans in a region is less than the median number of Independents in a region.
 - D. The median number of Independents in a region is less than the median number of Democrats in a region.
13. The data shows the test scores of four different classes.

Algebra: {87, 91, 64, 88, 74}
Geometry: {98, 86, 84, 91, 79}
Statistics: {87, 72, 84, 88, 91}
Pre-Algebra: {63, 82, 78, 71, 74}

Which class had the smallest interquartile range?

- A. Algebra
- B. Geometry
- C. Statistics
- D. Pre-Algebra

14. The data set below shows test scores for two different classes.

Class 1	Class 2
75, 80, 83, 77, 97, 51, 67, 87, 91, 77	86, 79, 94, 83, 81, 77, 72, 75, 92, 90

Which statement is true?

- A. The interquartile range of Class 1 is 12, and the interquartile range of Class 2 is 13.
 - B. The interquartile range of Class 1 is 13, and the interquartile range of Class 2 is 12.
 - C. The interquartile range of Class 1 is 22, and the interquartile range of Class 2 is 46.
 - D. The interquartile range of Class 1 is 46, and the interquartile range of Class 2 is 22.
15. Kaitlyn, Mara, and Paul recorded how many minutes they watched television each day for 2 weeks. Their results are recorded in the table below.

Kaitlyn	110	140	150	90	150	30	160	20	100	180	150	70	60	50
Mara	30	40	70	40	35	60	20	10	80	0	55	25	40	45
Paul	35	85	70	80	10	55	170	40	60	30	40	110	100	35

Which statement is true?

- A. Kaitlyn's data has a greater interquartile range than Mara's data.
- B. Mara's data has a greater interquartile range than Kaitlyn's data.
- C. Paul's data has a greater interquartile range than Kaitlyn's data.
- D. Mara's data has a greater interquartile range than Paul's data.

16. The data below shows the number of hours boys and girls spent studying for a test.

Boys: {2, 1, 3, 1, 2, 2}
Girls: {4, 1, 3, 2, 2, 4}

What is the difference in the interquartile range between the girls and boys?

- A. 1
- B. 2
- C. 3
- D. 5

17. Two teachers recorded test scores for a small group of students.

Teacher A	69	73	79	83	93	97	98	100
Teacher B	65	70	73	75	90	93	94	95

What is the **approximate** difference in the standard deviation of the two teachers' test scores?

- A. 0.06
- B. 0.14
- C. 0.22
- D. 0.48

18. Four data sets are shown below.

Set 1: {10, 19, 38, 50, 51}

Set 2: {5, 21, 26, 39, 51}

Set 3: {9, 38, 50, 50, 51}

Set 4: {5, 28, 28, 28, 51}

Which data set has the largest standard deviation?

- A. Set 1
- B. Set 2
- C. Set 3
- D. Set 4

19. A survey asked the ages of people and whether they purchase diet soda or regular soda. The results are shown in table below.

Ages of People Surveyed

Diet Soda	26	42	41	18	39	22	30	34	37	22
Regular Soda	16	48	32	21	26	41	35	22	46	27

What is the difference in the median age of those who purchase diet soda to those who purchase regular soda?

- A. 0.3 years
- B. 2.5 years
- C. 4.5 years
- D. 5.5 years

20.

The data sets below represent the results of surveys conducted with ten high school students to determine the number of hours per week they spend studying for their classes.

Algebra {3, 0, 8, 7, 4, 1, 9, 7, 4, 8}

Chemistry {5, 7, 3, 2, 8, 1, 2, 9, 11, 6}

English {2, 4, 0, 9, 1, 2, 6, 3, 10, 2}

US History {9, 1, 5, 2, 0, 0, 4, 2, 7, 3}

Which data set has the greatest interquartile range?

- A. Algebra
- B. Chemistry
- C. English
- D. US History

21. The data shows the test scores for two different instructors.

Ms. Johnson's Class	Ms. Brown's Class
60, 60, 80, 84, 75, 70, 93, 60, 60	90, 85, 55, 60, 85, 70, 90, 60, 85, 92, 79, 73, 65

Which statement is true?

- A. Ms. Brown's class had a smaller mean than Ms. Johnson's class.
- B. Ms. Brown's class had a larger mean than Ms. Johnson's class.
- C. Ms. Brown's class and Ms. Johnson's class had the same mean.
- D. Ms. Brown's class had a smaller median than Ms. Johnson's class.

22. Greg measured the lengths of the vehicles in the school parking lot. He recorded the data in the table below.

Type of Vehicle	Length (inches)									
Cars	160	176	173	182	163	185	180	172	175	174
Other Vehicles	192	95	180	202	98	208	200	105	210	190

What is the difference in the interquartile range for the 2 types of vehicles?

- A. 97
 B. 89
 C. 8
 D. 6
23. What is the **approximate** difference between the medians of the two sets of data shown below?

Set 1: {2.99, 1.89, 3.99, 7.43}

Set 2: {2.99, 6.32, 2.87, 3.28}

- A. 0.21
 B. 0.36
 C. 0.73
 D. 0.94
24. Danny and Dennis are siblings who both own car dealerships. They tracked the number of customers who visited their respective dealerships over seven days and recorded the data in the chart below.

Owner	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Danny	15	28	8	29	9	20	17
Dennis	19	2	26	27	17	23	29

What is the difference between the interquartile range for the two sets of data?

- A. 8
 B. 9
 C. 10
 D. 19

25. The prices for several items at two stores are given below.

Store X	Store Y
\$2.81	\$3.39
\$2.61	\$2.68
\$2.96	\$2.27
\$3.03	\$1.59
\$4.25	\$2.83

Based on this data, which statement is true?

- A. The standard deviation for Store X is greater than the standard deviation for Store Y by about 0.03.
- B. The standard deviation for Store X is greater than the standard deviation for Store Y by about 0.3.
- C. The standard deviation for Store X is less than the standard deviation for Store Y by about 0.03.
- D. The standard deviation for Store X is less than the standard deviation for Store Y by about 0.3.

26. Josh and three of his friends collect baseball cards. They keep track of how many new cards they buy each month on the table below.

Name	January	February	March	April	May
Josh	12	10	15	12	10
Fred	13	13	16	17	4
Hank	12	13	13	15	14
Sam	15	12	16	12	14

Which month has the greatest median?

- A. February
- B. March
- C. April
- D. May

27. Two students' test grades are recorded below.

- Seth: {95, 94, 89, 90, 91, 96, 97, 93}
- Nicole: {71, 73, 71, 72, 98, 95, 86, 79}

Based on these data sets, which statement below is true?

- A. Seth had a higher standard deviation by about 2.2.
- B. Seth had a higher standard deviation by about 8.2.
- C. Nicole had a higher standard deviation by about 2.2.
- D. Nicole had a higher standard deviation by about 8.2.

28. The table below shows the heights, in feet, of the five tallest buildings in three cities in the United States.

New York	Chicago	Boston
1,250	1,451	790
1,200	1,389	749
1,046	1,136	614
1,046	1,127	601
977	1,007	600

Which statement is true about the data?

- A. The interquartile range for New York's buildings is less than the interquartile range for Boston's buildings.
- B. The interquartile range for Chicago's buildings is less than the interquartile range for Boston's buildings.
- C. The interquartile range for New York's buildings is greater than the interquartile range for Chicago's buildings.
- D. The interquartile range for Chicago's buildings is greater than the interquartile range for New York's buildings.

29. The data below shows the rowing times for members of a local boat racing club.

Men	Women
7 m 20 s	7 m 46 s
7 m 25 s	7 m 47 s
7 m 26 s	7 m 39 s
7 m 28 s	7 m 49 s
7 m 28 s	7 m 49 s
7 m 27 s	7 m 50 s
7 m 24 s	7 m 51 s
7 m 26 s	7 m 57 s
7 m 19 s	7 m 49 s

What is the **approximate** difference between the men's mean rowing time and the women's fastest rowing time?

- A. 12 seconds
 - B. 14 seconds
 - C. 20 seconds
 - D. 23 seconds
30. Each player on the boys' and girls' basketball teams recorded the total number of points he or she scored the entire season.

Boys' Team	35	21	40	17	37	25	42	23	16	25
Girls' Team	18	22	15	50	48	32	31	25	26	42

What is the difference between the interquartile ranges of the two teams?

- A. 9
- B. 7
- C. 4
- D. 3