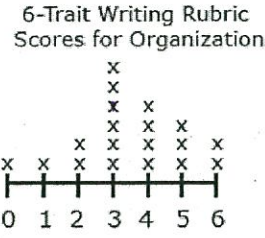


Example Review Questions (taken from DPI Unpacked Document)

Key

Example 1:

The dot plot shows the writing scores for a group of students on organization. Describe the data.



*No outlier
Median 3 / $\bar{x} \approx 3.5$
Range 6
Skew left*

Example 2:

Consider the data shown in the dot plot of the six trait scores for organization for a group of students.

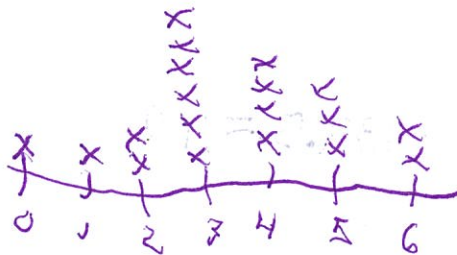
- How many students are represented in the data set? *19*
- What are the mean and median of the data set? What do these values mean? How do they compare?
- What is the range of the data? What does this value mean?

Median 3



Example 3:

Nineteen students completed a writing sample that was scored on organization. The scores for organization were 0, 1, 2, 2, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5, 6, 6. Create a data display. What are some observations that can be made from the data display?



*L: 0
Q1: 3
Med: 3
Q3: 5
U: 6*

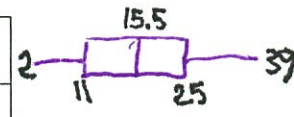
Example 4:

use calc

Grade 6 students were collecting data for a math class project. They decided they would survey the other two grade 6 classes to determine how many DVDs each student owns. A total of 48 students were surveyed. The data are shown in the table below in no specific order. Create a data display. What are some observations that can be made from the data display?

11	21	5	12	10	31	19	13	23	33
10	11	25	14	34	15	14	29	8	5
22	26	23	12	27	4	25	15	7	
2	19	12	39	17	16	15	28	16	

outlier otherwise Mound Shape

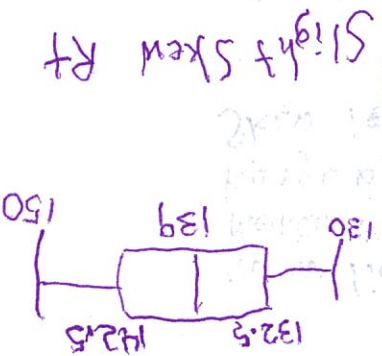


try histogram

Example 5:

Ms. Wheeler asked each student in her class to write their age in months on a sticky note. The 28 students in the class brought their sticky note to the front of the room and posted them in order on the white board. The data set is listed below in order from least to greatest. Create a data display. What are some observations that can be made from the data display?

130	130	131	131	132	132	132	132	132	132	133	134	136
137	137	138	139	139	139	139	140	141	142	142	142	142
142	143	143	144	144	145	147	147	149	150			



Example 6:

Susan has four 20-point projects for math class. Susan's scores on the first 3 projects are shown below:

- Project 1: 18
- Project 2: 15
- Project 3: 16
- Project 4: ??

$$\frac{18 + 15 + 16 + x}{4} = 17$$

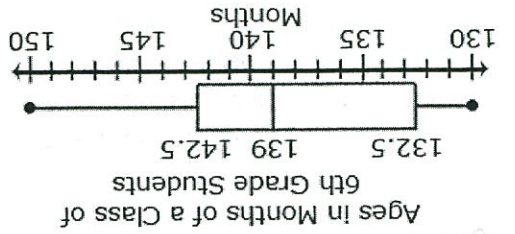
$$49 + x = 68$$

$$x = 19$$

What does she need to make on Project 4 so that the average for the four projects is 17? Explain your reasoning.

Example 7:

What is the IQR of the data below:



$$142.5 - 132.5 = 10$$

Example 8:

The following data set represents the size of 9 families:

- 3, 2, 4, 2, 9, 8, 2, 11, 4.

What is the MAD for this data set?

Handwritten calculations for Example 8:

$$\frac{26}{9} \approx 2.9$$

Mean: $\frac{45}{9} = 5$

Deviations from mean: $3-5, 2-5, 4-5, 2-5, 9-5, 8-5, 2-5, 11-5, 4-5$

Absolute deviations: $2, 3, 1, 3, 4, 3, 3, 6, 1$

Sum of absolute deviations: $2+3+1+3+4+3+3+6+1 = 26$

MAD: $\frac{26}{9} \approx 2.9$

Example 9:

The school food service wants to increase the number of students who eat hot lunch in the cafeteria. The student council has been asked to conduct a survey of the student body to determine the students' preferences for hot lunch. They have determined two ways to do the survey. The two methods are listed below. Determine if each survey option would produce a random sample. Which survey option should the student council use and why?

1. Write all of the students' names on cards and pull them out in a draw to determine who will complete the survey.
2. Survey the first 20 students that enter the lunchroom.
3. Survey every 3rd student who gets off a bus.

Example 10:

Below is the data collected from two random samples of 100 students regarding student's school lunch preference. Make at least two inferences based on the results.

Student Sample	Hamburgers	Tacos	Pizza	Total
#1	12	14	74	100
#2	12	11	77	100

Example 11:

Jason wanted to compare the mean height of the players on his favorite basketball and soccer teams. He thinks the mean height of the players on the basketball team will be greater but doesn't know how much greater. He also wonders if the variability of heights of the athletes is related to the sport they play. He thinks that there will be a greater variability in the heights of soccer players as compared to basketball players. He used the rosters and player statistics from the team websites to generate the following lists.

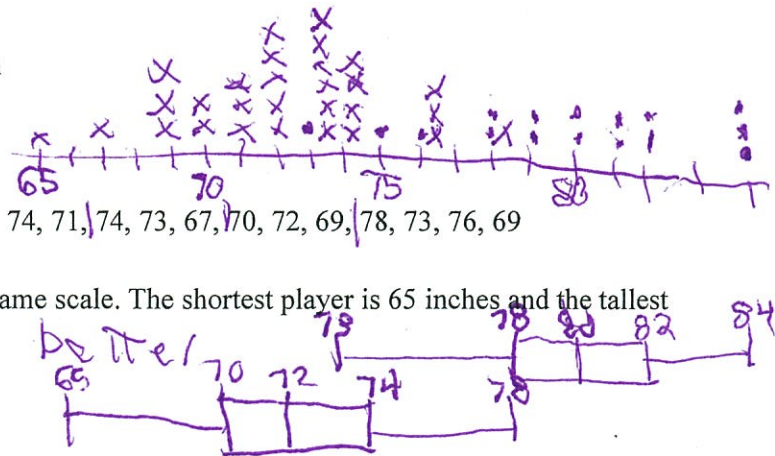
Basketball Team – Height of Players in inches for 2010 Season

75, 73, 76, 78, 79, 78, 79, 81, 80, 82, 81, 84, 82, 84, 80, 84

Soccer Team – Height of Players in inches for 2010

73, 73, 73, 72, 69, 76, 72, 73, 74, 70, 65, 71, 74, 76, 70, 72, 71, 74, 71, 74, 73, 67, 70, 72, 69, 78, 73, 76, 69

To compare the data sets, Jason creates a two dot plots on the same scale. The shortest player is 65 inches and the tallest players are 84 inches.



Example 12:

The two data sets below depict random samples of the management salaries in two companies. Based on the salaries below which measure of center will provide the most accurate estimation of the salaries for each company?

- Company A: 1.2 million, 242,000, 265,500, 140,000, 281,000, 265,000, 211,000
 $140 - 211 - 242 - 265 - 265 - 281$ $M = 234,000$ Med 253,500
- Company B: 5 million, 154,000, 250,000, 250,000, 200,000, 160,000, 190,000
 $154 - 160 - 190 - 200 - 250 - 250$ $M = 200,667$ Med 195,000

