

Welcome MYP 9 Mathematics!

	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
Monday Date: <u>4/30</u> Topic: <u>Unit 7 Review</u>	0 1 2	
Tuesday Date: _____ Topic: _____	0 1 2	
Wednesday Date: _____ Topic: _____	0 1 2	
Thursday Date: _____ Topic: _____	0 1 2	
Friday Date: _____ Topic: _____	0 1 2	

Class Plan

1. Warm-up
2. Questions from Friday's review?
3. Review Handout

Warm-up 9th graders were asked "How many people are in your household?" The results show:

4, 2, 3, 7, 2, 4, 5, 4, 2, 3, 8, 2, 2, 7, 5, 4, 6

What conclusions could be made from the data?

What displays and measures could support your conclusion?

What limitations are there to your conclusion?

No outliers

$\bar{X} \approx 4.1$ people

$\sigma \approx 1.9$

Conclusion: 9th grade students have similar amounts of family members in their home. At least two people live in each household, and no more than 7 other people live with these students. Most students had 4 people in their home, and on average, each household had 2 more or less from about 4 people. A Box plot would show that most households are between 2 and about 6. **Limited** amount of data.

Warm-up

9th graders were asked "How many people are in your household?" The results show:

4, 2, 3, 7, 2, 4, 5, 4, 2, 3, 8, 2, 2, 7, 5, 4, 6

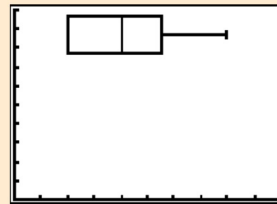
What conclusions could be made from the data?

What displays and measures could support your conclusion?

What limitations are there to your conclusion?

```
1-Var Stats
x̄=4.117647059
Σx=70
Σx²=350
Sx=1.96476312
σx=1.906100205
n=17
```

```
1-Var Stats
n=17
minX=2
Q1=2
Med=4
Q3=5.5
maxX=8
```



Unit 7 Statistics Review Day!

This data set gives the number minutes it takes 19 students to get to school in the morning:

5, 13, 15, 24, 27, 28, 29, 30, 31, 33, 33, 35, 41, 42, 42, 43, 50, 51, 61

DO: Review Handout
***Check Solutions

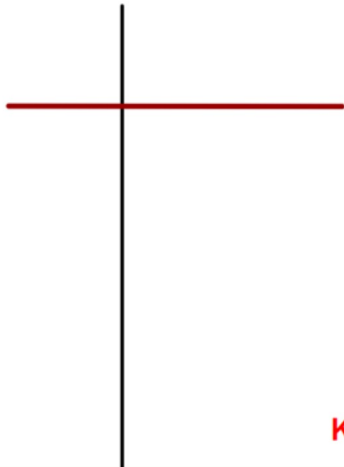


When done: Look over other
Unit 7 materials

This data set gives the number minutes it takes 19 students to get to school in the morning:

5, 13, 15, 24, 27, 28, 29, 30, 31, 33, 33, 35, 41, 42, 42, 43, 50, 51, 61

1) Create a stem-and-leaf plot of the data.



Key:

SOLUTIONS

This data set gives the number minutes it takes 19 students to get to school in the morning:

5, 13, 15, 24, 27, 28, 29, 30, 31, 33, 33, 35, 41, 42, 42, 43, 50, 51, 61

1) Create a stem-and-leaf plot of the data.

commute to school

STEM | LEAF

0	5
1	3 5
2	4 7 8 9
3	0 1 3 3 5
4	1 2 2 3
5	0 1
6	1

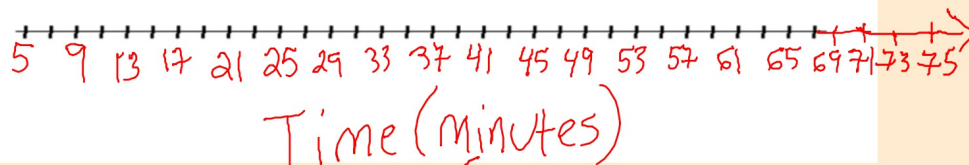
Key: 0|5 = 5 minutes



2) i. Use your calculator to find the 5 # summary.

Min 5 Q_1 _____ Median _____ Q_3 _____ Max 75 IQR _____

ii. Create a box plot of the data set.



iii. Analyze the box plot. Complete the sentences:

“Fifty percent of the students travel between _____ and _____ minutes to get to school.”

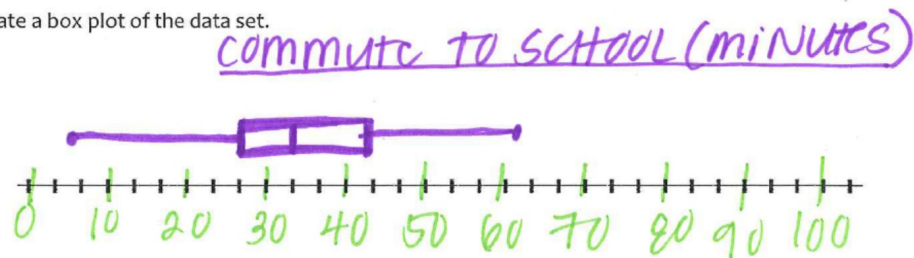
“25% percent of the students travel more than _____ minutes.”

SOLUTIONS

2) i. Use your calculator to find the 5 # summary.

Min 5 Q₁ 27 Median 33 Q₃ 42 Max 61 IQR 15

ii. Create a box plot of the data set.



iii. Analyze the box plot. Complete the sentences:

"Fifty percent of the students travel between 27 and 42 minutes to get to school."

"25% percent of the students travel more than 42 minutes."

3) Calculate any outliers in the data set.

$$\text{Outlier} < Q_1 - 1.5IQR$$

$$\text{Outlier} > Q_3 + 1.5IQR$$

- 4) i. Find the mean (\bar{x}) and the standard deviation, (σ). $\bar{x} \approx$ _____ $\sigma \approx$ _____
- ii. Suppose students who are two standard deviations below the mean do not get Go-Cards. How many of the 19 students from the survey will **not** get a Go-Card? Explain how you got your answer.

SOLUTIONS

3) Calculate any outliers in the data set. $1.5(15) = 22.5$
Outlier $< Q_1 - 1.5IQR$ $Q_1 - 1.5IQR = 27 - 22.5 = 4.5$ NO TIMES BELOW 4.5 MIN
Outlier $> Q_3 + 1.5IQR$ $Q_3 + 1.5IQR = 42 + 22.5 = 64.5$ NO TIMES ABOVE 64.5 MIN

4) i. Find the mean (\bar{x}) and the standard deviation, (σ). $\bar{x} \approx 33.3$ $\sigma \approx 13.4$
ii. Suppose students who are less than ~~one~~ ^{two} standard deviations from the mean do not get Go-Cards.
How many of the ~~19~~ ^{two} students from the survey will not get a Go-Card? Explain how you got your answer.

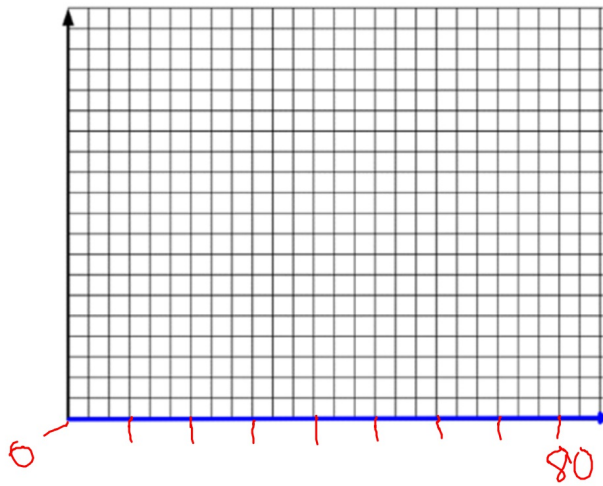
$$33.3 - 2(13.4) = \text{MINUTES}$$

0.5

This means one student who travels 5 minutes will not get a Go-Card.

5) i. Create a histogram for the data.

Interval	# of Students
0-10	
10-20	
20-30	
30-40	
40-50	
50-60	
60-70	
70-80	2

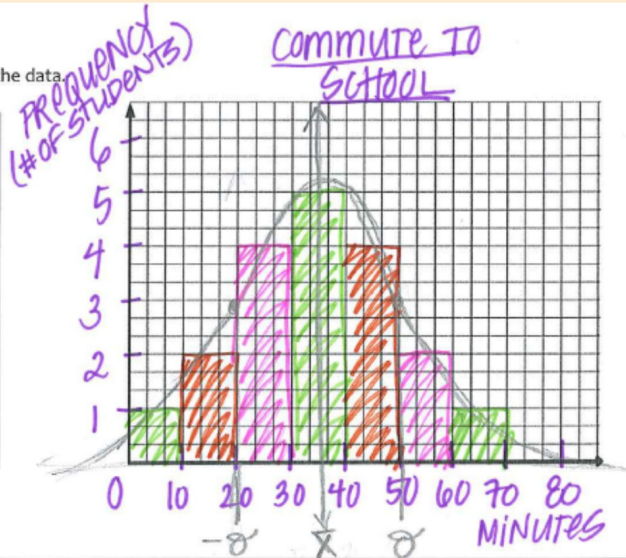


ii. Describe the histogram.

SOLUTIONS

5) i. Create a histogram for the data

Interval	# of Students
$0 \leq X < 10$	1
$10 \leq X < 20$	2
$20 \leq X < 30$	4
$30 \leq X < 40$	5
$40 \leq X < 50$	4
$50 \leq X < 60$	2
$60 \leq X < 70$	1



ii. Describe the histogram.

- SYMMETRICAL ... NORMAL!
- MODAL CLASS: 30-40 MIN COMMUTE

Exercises...

Study for Unit 7 Statistics Test!
(Finish Review Sheet)