

On the first day of school, I surveyed the class on the average time it took them to get to school.

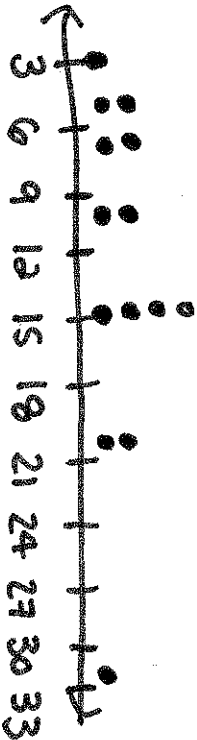
Here are some of the results (in minutes):

5, 15, 20, 15, 10, 15, 15, 20, 10, 5, 7, 3, 7, 32

1. Create a frequency table using INTERVALS for the data.

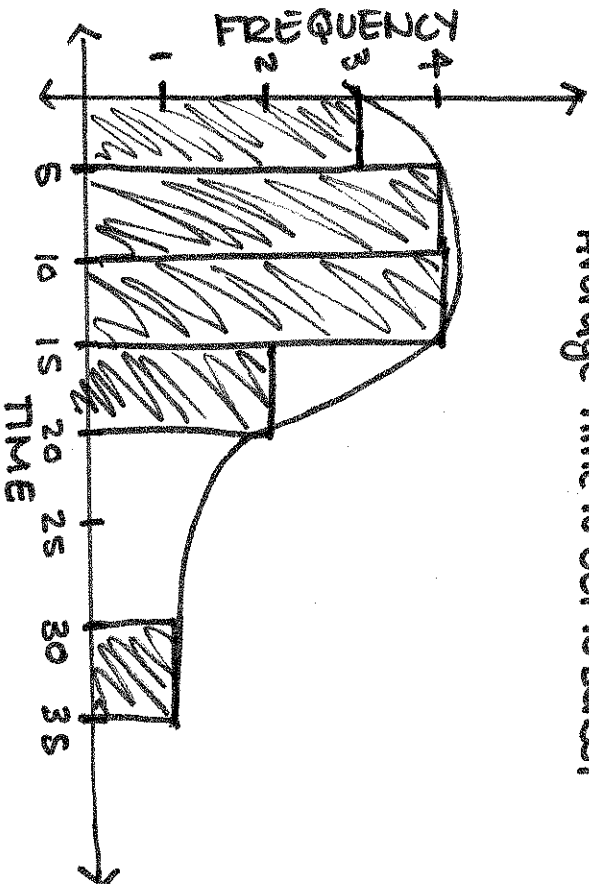
<u>AVG TIME</u>	<u>FREQUENCY</u>
0-5	3
6-10	4
11-15	4
16-20	2
21-25	0
26-30	0
31-35	1

2. Create a dot plot representing the data.



3. Create a histogram representing the data.

Average Time To Get To School



4. Write a paragraph explaining the data distribution. Use the FOUR characteristics of data distribution: shape, center, spread, outliers.

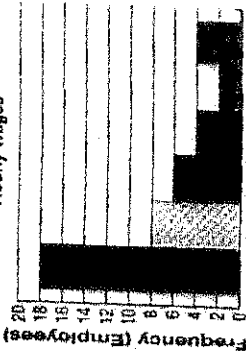
The shape of the distribution is skewed right. Most of the times are around 10 minutes. The times spread from 3 to 32 and have a range of 29. The outlier is 32.

GUIDED PRACTICE:

How many employees in this company earn less than \$20 dollars per hour?

How many total employees in this company are represented by the "Hourly Wages" histogram?

Hourly Wages



REFLECTION:

What do you notice about the number of employees in each category? Why do you think this is?

CHECK FOR UNDERSTANDING: The numbers of floors in each of ten tall buildings are listed at 73, 48, 65, 57, 60, 70, 42, 50, 78, and 56. Which frequency table is accurate for this set of data?

A.	B.	C.	D.
Interval	Interval	Interval	Interval
40-49	40-49	40-49	40-49
50-59	50-59	50-59	50-59
60-69	60-69	60-69	60-69
70-79	70-79	70-79	70-79
Frequency	Frequency	Frequency	Frequency
3	2	2	3
2	3	3	2
3	2	3	2
2	3	2	3

The data below shows the weights, in pounds, of 20 cats and kittens.

Use the data to complete the frequency table.

- 15, 12, 10, 8, 9, 11, 5, 16, 13, 16,
- 18, 15, 9, 10, 11, 13, 15, 19, 10, 10

Weights of Cats and Kittens

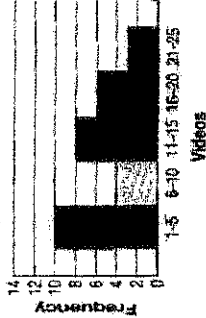
Weight (in pounds)	Frequency
1-5	
6-10	
11-15	
16-20	

INDEPENDENT PRACTICE: This histogram shows the number of videos rented over a 1 month period.

1.) How many individuals were surveyed in this one month period?

- A. 25 individuals
- B. 10 individuals
- C. 31 individuals
- D. 14 individuals

Videos Rented in 1 Month



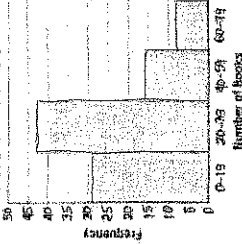
2.) How many individuals rented more than 10 but less than 21 videos?

- E. 17 individuals
- F. 4 individuals
- G. 6 individuals
- H. 18 individuals

All answers should be APPROXIMATE.

The histogram below shows the number of books read during the school year by the students in Ms. Brown's four language arts classes. Use this histogram to answer questions 1 and 2.

Number of Books Read by Students in Ms. Brown's LA Classes



Based on this histogram, how many of Ms. Brown's students read less than 60 books during the school year.

Determine from the histogram how many students read at least 20 but less than 60 books.

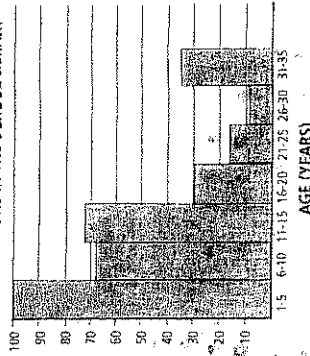
According to this histogram, how many total Language Arts students does Ms. Brown teach?

QUIZ REVIEW

Which of these is NOT a true statement?

- A. There are more books that are less than 15 years old than books that are more than 15 years old.
- B. No age category shows more than 100 books.
- C. Fewer than 50 books are older than 20 years.
- D. About half of the books are less than 11 years old.

AGE OF BOOKS IN THE SCHOOL LIBRARY



UNIT 7 • WORKING WITH DATA

Day 53

Day 53 Guided Practice**Histograms on the Calculator I**

Create a histogram for each set of data below using your calculator. Draw the histogram (from your calculator screen). Then describe the shape, center, and spread of your histogram.

1. Officer Phil pulls off to the side of the highway, and decides to clock the speeds of drivers as they pass by. He records the speeds of 20 cars that go by him, which are (in miles per hour):

65, 59, 70, 72, 62, 55, 57, 74, 70, 68, 63, 65, 71, 69, 66, 67, 58, 77, 70, 65

Draw your histogram (from your calculator screen) below:

Describe the shape: _____

Describe the interval that contains the center: _____

Describe the spread: _____

2. Lightning Larry is a wide receiver for his football team. Last game, he caught 15 passes! Here is the data for how long each reception was (in yards):

8, 6, 15, 19, 4, 9, 11, 7, 10, 18, 3, 9, 16, 2, 6

Draw your histogram (from your calculator screen) below:

Describe the shape: _____

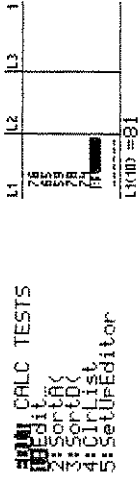
Describe the interval that contains the center: _____

Describe the spread: _____

Make a Histogram on Your Calculator!

I'll use the following heights of a group of seventh graders as an example.

Step 1: Enter the height data in L₁.
 Commands: STAT → EDIT



Step 2: Setup the graph.
 Commands: 2nd → Y= → 1

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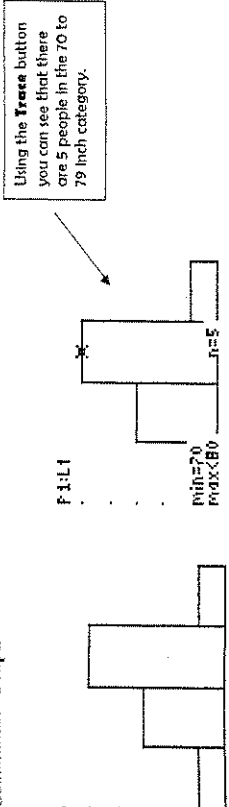
2: Plot1... On
   Xlist: L1
   Ylist: L1
   Freq: 1
   Plot1... Off
   Plot2... Off
   Plot3... Off
   Plot4... Off
   Plot5... Off
   Plot6... Off
   Plot7... Off
   Plot8... Off
   Plot9... Off
   Plot10... Off
    
```

Step 3: Adjust the window to fit the data. Use Xscl to adjust the width of the bars. I used 10 here because I want to see how many people are in each category of 10 inches.
 Commands: WINDOW

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WINDOW
Xmin=50
Xmax=90
Xscl=10
Ymin=60
Ymax=80
Vmax=1
Vmin=1
Xres=1
    
```

Step 4: Look at your graph!
 Commands: GRAPH



Homework – Representing Data Graphically

Answer the following questions on your own paper. All graphs must be done on graph paper.

1. Suzie surveyed her class with the following question: "How many hours of TV do you typically watch in one week." Below is the data she collected:

8	2	6	4	4	5	6	1	11	10
4	2	1	10	6	10	7	6	2	9
11	7	8	6	9	2	4	2	2	7

- Create a dot plot of this data.
- Describe the data distribution in context.

2. The number of representatives each state has in the US Congress depends on the population of the state. Below are the numbers of representatives in each state in the 100th Congress (1988-1990).

7	1	5	4	45	6	6	1	19	10
2	2	22	10	6	5	7	8	2	8
11	18	8	5	9	2	3	2	2	14
3	34	11	1	21	6	5	23	2	6
1	7	27	3	1	10	8	4	9	1

- State the minimum number of representatives.
- State the maximum number of representatives.
- Find the range.
- Make a frequency table showing the distribution of the number of representatives per state. Use intervals of length 5 (ie 1-5, 6-10...)
- Using your calculator, create a histogram to represent the data. The x-axis scale should match the intervals in the frequency table above. Use the trace function to help you sketch an accurate histogram below.
- What is the window of the histogram you created?

DAY 3 HW