Name _____

Date _____ Pd _____

HISTOGRAMS

HISTOGRAMS

- Histograms show data in _____ or ranges.

- They are similar to bar graphs, but the bars are not spaced apart. They are similar to dot plots because they represent the overall _____ and _____ of the data.

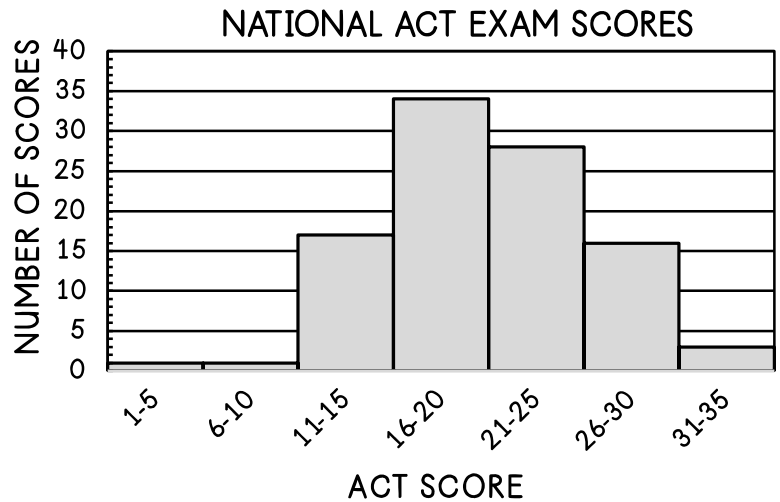Ex: _____

Data from the National ACT Exam is shown in the histogram at the right.

a. How many scores were included in the data set?

b. List the number of scores for each range:

1-5: _____	21-25: _____
6-10: _____	26-30: _____
11-15: _____	31-35: _____
16-20: _____	

NATIONAL ACT EXAM SCORES

(Histogram: NUMBER OF SCORES vs ACT SCORE)
- 1-5: 1
- 6-10: 1
- 11-15: 17
- 16-20: 34
- 21-25: 28
- 26-30: 16
- 31-35: 3

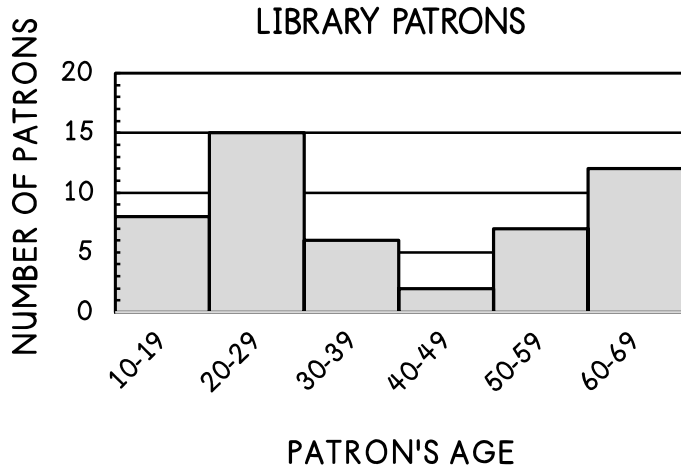| 1. Which range of scores represents 17% of the data?	2. What percent of the scores are included in the 21-25 range?
3. What two ACT score ranges make up more than 60% of the sample?	4. The histogram is symmetrical. What does this tell you about the median and the mean? In which interval would you predict the mean to be found?

5. Label each of the statements below as true or false. Correct any false statements.

_____ a. The number of scores between 1-5 and 26-30 is equal to the number of scores between 11-15.

_____ b. The number of scores between 16-20 is double that of 11-15.

_____ c. There are an equal number of scores between 11-15 and 26-30.

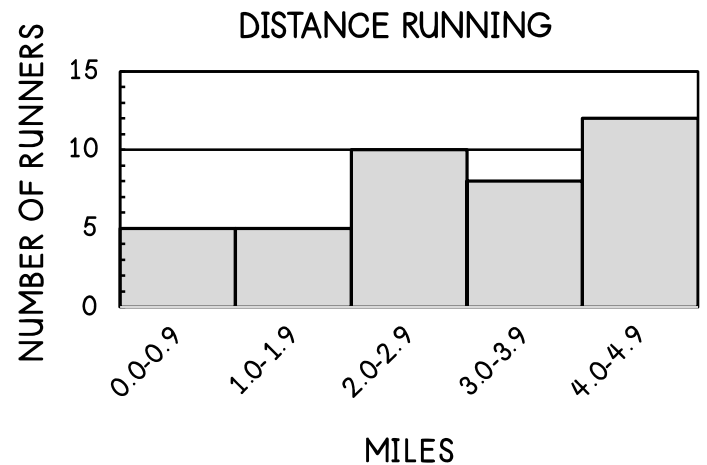The local library surveys its patrons based on their age. Use the histogram below to answer questions 6-9.

LIBRARY PATRONS

NUMBER OF PATRONS

PATRON'S AGE

(x-axis: 10-19, 20-29, 30-39, 40-49, 50-59, 60-69)

A group of runners chart their distance total for the week. Use the histogram below to answer questions 10-12.

DISTANCE RUNNING

NUMBER OF RUNNERS

MILES

(x-axis: 0.0-0.9, 1.0-1.9, 2.0-2.9, 3.0-3.9, 4.0-4.9)

6. Determine the total number of library patrons surveyed.

10. How many runners run between 3.0-4.9 miles each week?

7. How many library patrons are younger than 30?

11. How many runners run less than 4.0 miles each week?

8. Based on the information in the graph, which two age ranges are responsible for exactly 40% of the patrons?

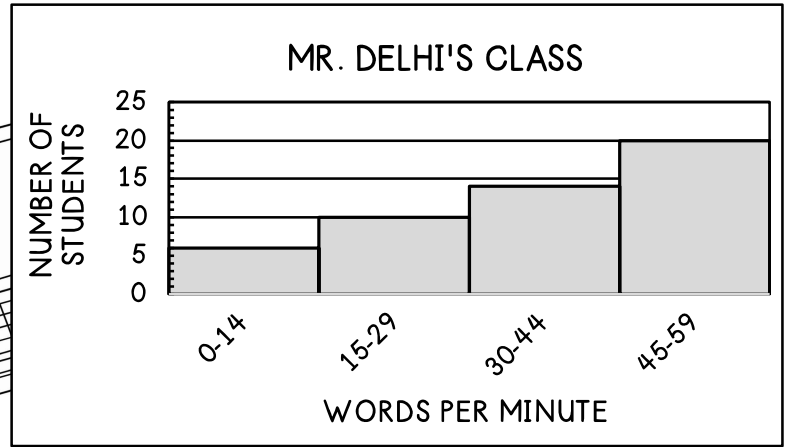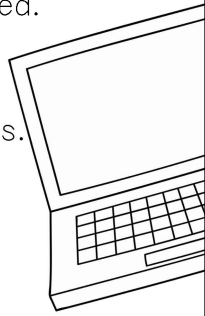12. Which of the following statements best represents the data above?

A. Twenty-five percent of runners surveyed run 4.0-4.9 miles each week.

B. One-third of runners surveyed run 2.0-2.9 miles each week.

C. One-fifth of runners run 3.0-3.9 miles each week.

9. Based on the information in the graph, 30% of the library patrons are in which age range?

D. The number of runners surveyed who run less than 1.0 mile is equal to the number of runners surveyed who run 3.0-3.9 miles each week.

Summarize today's lesson:

Name _____

Date _____ Pd_____

HISTOGRAMS

In computer class, students take a typing test to determine their speed.

The histogram at the right shows the scores of the students in class.

MR. DELHI'S CLASS

NUMBER OF STUDENTS

25
20
15
10
5
0

0-14   15-29   30-44   45-59

WORDS PER MINUTE

1. Label each of the statements below as true or false. Correct any false statements.

_____ a. A total of 40 students can type from 0-59 words per minute.

_____ b. The number of students who typed 45-59 words per minute is equal to the number of students who typed 0-29.

_____ c. The number of students who typed 30-44 words per minute accounted for 28% of the students.

_____ d. Less than 15% of the students type 0-14 words per minute.

2. Based on the information above, what percent of students type less than 30 words per minute?

3. Forty percent of the students were able to type at which speed interval?

4. Describe the distribution of the data. Estimate in which range the median of the data lies.

_____

_____

_____