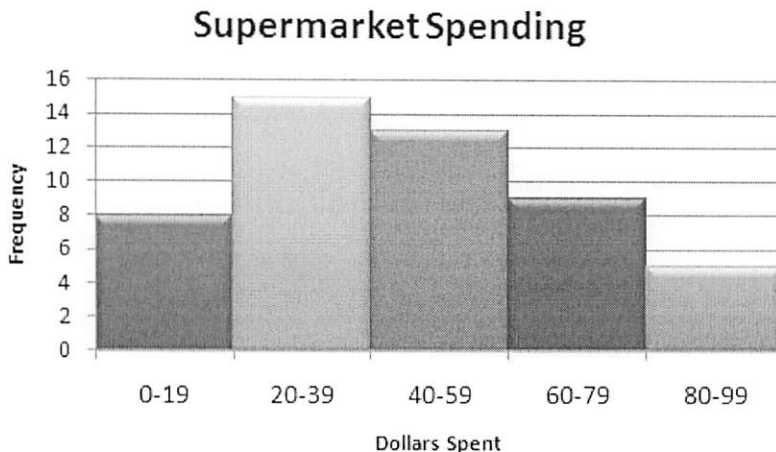# Frequency Histograms

A histogram is a special type of bar graph that shows the frequency a data item occurs. Histograms often combine data into intervals of equal size.

The histogram below shows the amount of money customers spent in a supermarket.

Supermarket Spending

Based on the histogram, how many people were surveyed? _____

What is the greatest amount of money that any customer spent? _____

Which interval represents the greatest number of customers? _____

How many customers spent less than $60? _____

The data below shows the number of winning points scored at 15 NCAA Division I Women's Basketball Championship games from 1991to 2005.

84, 70, 73, 82, 68, 71, 62, 93, 68, 83, 70, 75, 84, 78, 70

Winning	Tally	Frequency
59-64		
65-70		
71-76		
77-82		
83-88		
89-94		

Scatter plots display the relationship between two groups of data or **bivariate data**. Histograms display only one set of data called **univariate data**.
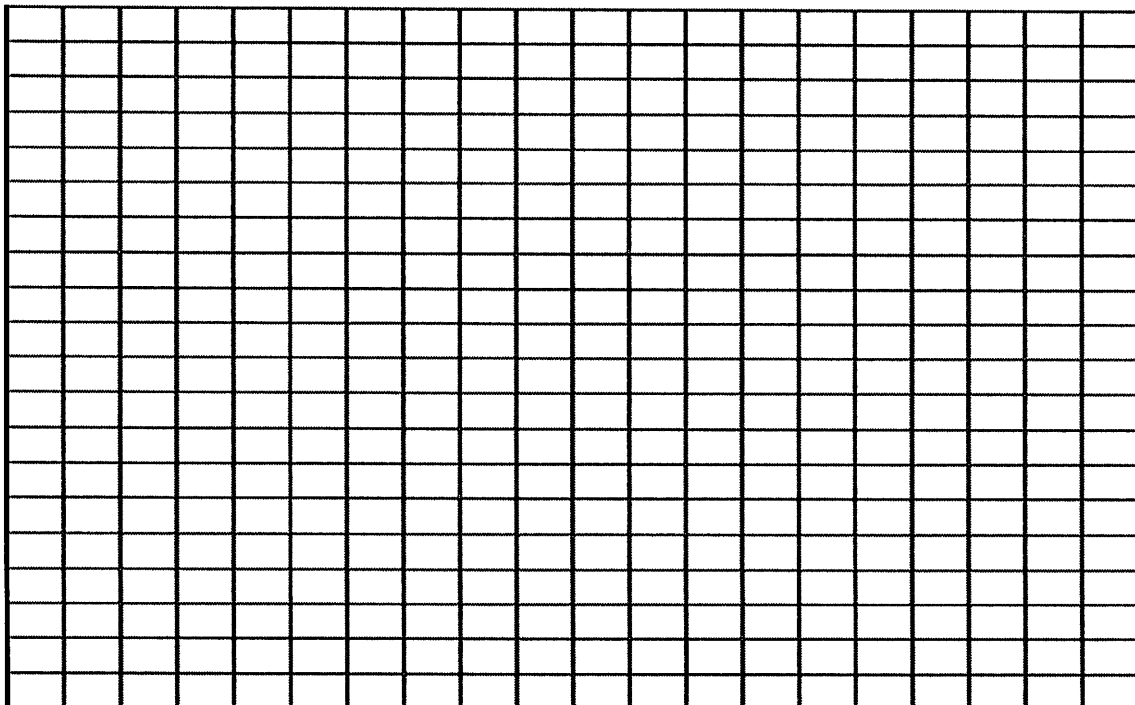
Let's Try One More Example!

The following data consists of the weights, in pounds of 24 high school students.

195, 206, 100, 98, 150, 210, 195, 106, 195, 108, 180, 212, 104, 195, 100, 216, 99, 206, 116, 142, 100, 135, 98, 160

a. Complete the tally and frequency table.

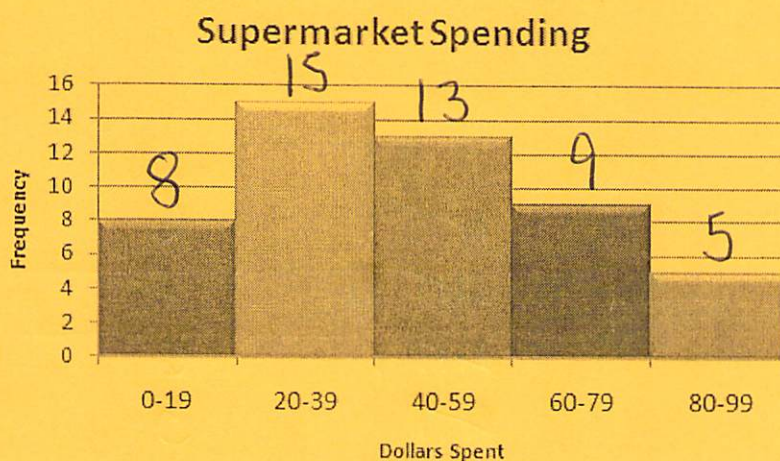| Interval	Tally	Frequency
51-100		
101-150		
151-200		
201-250		

b. Construct a frequency histogram.

How many students weigh less than 151 pounds? _____

Frequency Histograms

A histogram is a special type of bar graph that shows the frequency a data item occurs. Histograms often combine data into intervals of equal size.

The histogram below shows the amount of money customers spent in a supermarket.

Supermarket Spending

Dollars Spent

Based on the histogram, how many people were surveyed? **50**

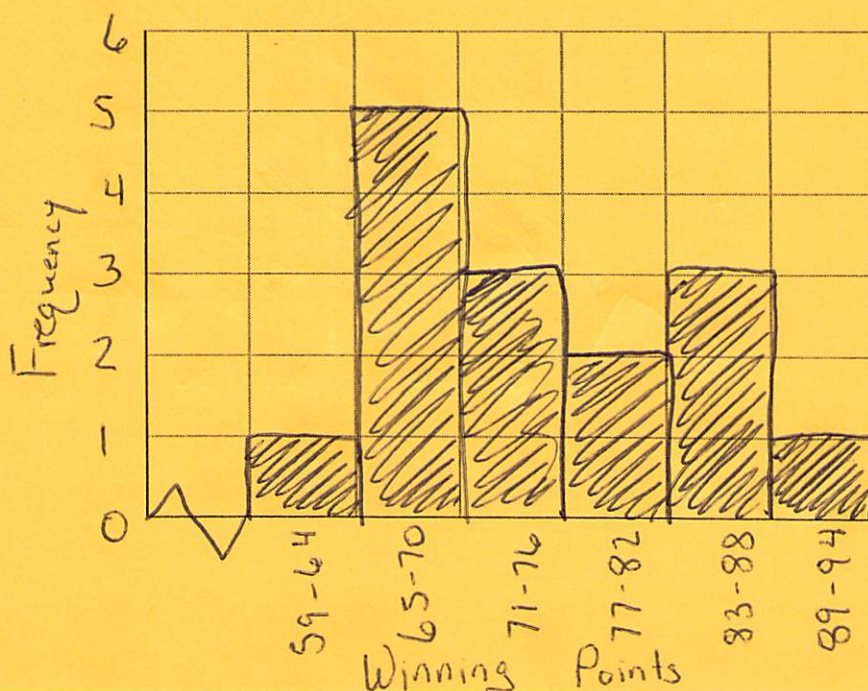What is the greatest amount of money that any customer spent? **$99**

Which interval represents the greatest number of customers? **$20 -$39**

How many customers spent less than $60? **36**

The data below shows the number of winning points scored at 15 NCAA Division I Women's Basketball Championship games from 1991 to 2005.

84, 70, 73, 82, 68, 71, 62, 93, 68, 83, 70, 75, 84, 78, 70

Winning	Tally	Frequency
59-64	I	1
65-70	HTI	5
71-76	III	3
77-82	II	2
83-88	III	3
89-94	I	1

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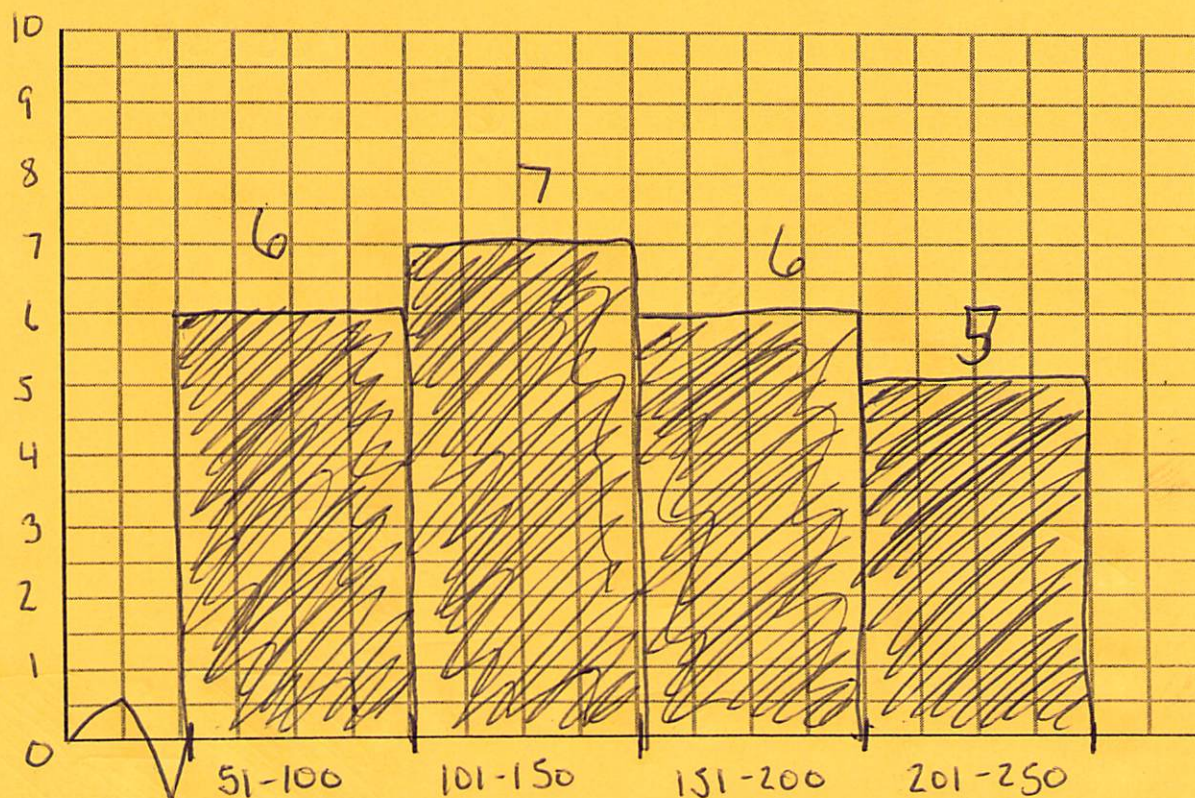
Let's Try One More Example!

The following data consists of the weights, in pounds of 24 high school students.

195, 206, 100, 98, 150, 210, 195, 106, 195, 108, 180, 212, 104, 195, 100, 216, 99, 206, 116, 142, 100, 135, 98, 160

a. Complete the tally and frequency table.

Interval	Tally	Frequency
51-100	HTT I	6
101-150	HTT II	7
151-200	HTT I	6
201-250	HTT	5

b. Construct a frequency histogram.

How many students weigh less than 151 pounds? _____13_____