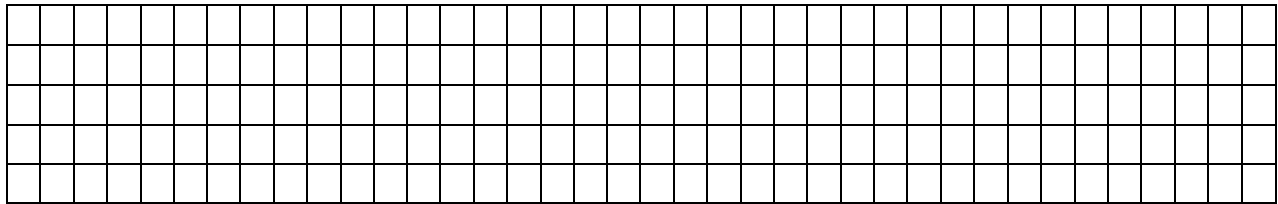**Box Plots**

1) the number of miles from school that a number of randomly chosen students live are given by the following data set: 5, 10, 15, 12, 1, 14, 9, 15, 3, 10, 12, 15, 8, 14, 13, 2

   a. Find the mean, median, mean, and mode.

   b. Find the 5 number summary.

   c. Find the IQR

   d. Are there any outliers?

   e. Construct a box-and-whisker plot.

2) Use the box plot below to answer the following questions.

Volunteers Hours at the Local Animal Shelter

Hours per Week
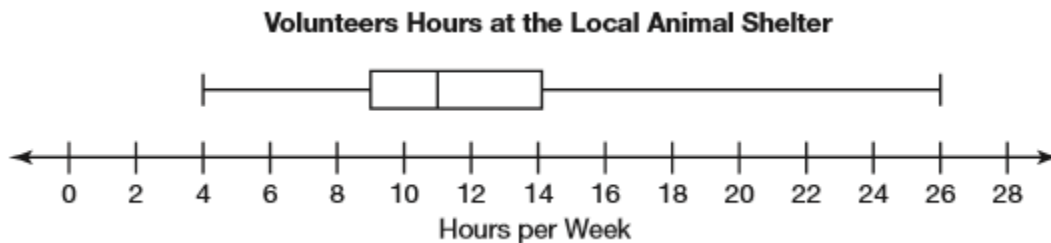
   a. How many people are represented on the box-and-whisker plot?

   b. What percent of the people volunteered 14 or more hours?

   c. What percent of the people volunteered less than 11 hours?

   d. How many hours did the middle 50% of the people volunteer?

   e. Is the data skewed right or left? How do you know?

Two-Way Frequency Tables

3) The table below shows the favorite colors of 30 students.

Favorite Colors

		Blue	Red	Yellow	Green	Total
Gender	Girls	7	2	4	3	16
	Boys	2	8	3	1	14
	Total	9	10	7	4	30

a. Create a relative frequency table for the given data.

b. How many students prefer red?

c. How many boys prefer blue?

d. What percent of the students are girls?

e. What percent of the girls prefer yellow?

f. What percent of boys prefer green?

Dot Plots

4) Use the dot plot below to answers questions about the number of participants who won gold medals at the Special Olympics.

Participants Who Won Gold Medals at the Special Olympics

Number of Gold Medals Won
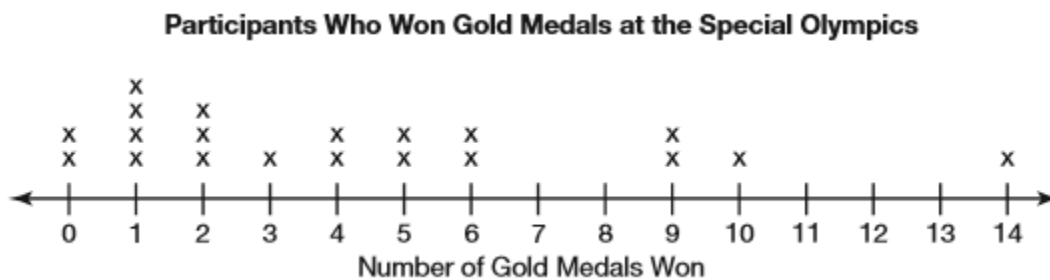
a. How many participants are represented in the dot plot?

b. What is the mean number of gold medals won?

c. Find the 5 number summary.

d. How many participants won 10 or more medals?

e. Would you expect the mean or median to be greater in this data set? Why?

Histograms

5) Students answers a survey question about how long it takes them to get ready in the morning.

Time to Get Ready

a. How many students answered the question?

b. How many students take less than 40 minutes to get ready?

c. What percent of surveyed students take longer than an hour to get ready?

6) Create a histogram using the data below.
Daily high temperature in degree Fahrenheit

63 70 64 71 70 62 68 67 72 65 62 59 58 60 59 53 51 55 56 50 53 57 55 50 46 49 46 52 58

Interval	# of values
40-44	
45-49	
50-54	
55-59	
60-64	
65-69	
70-74	

Daily High Temperatures in Degrees Fahrenheit
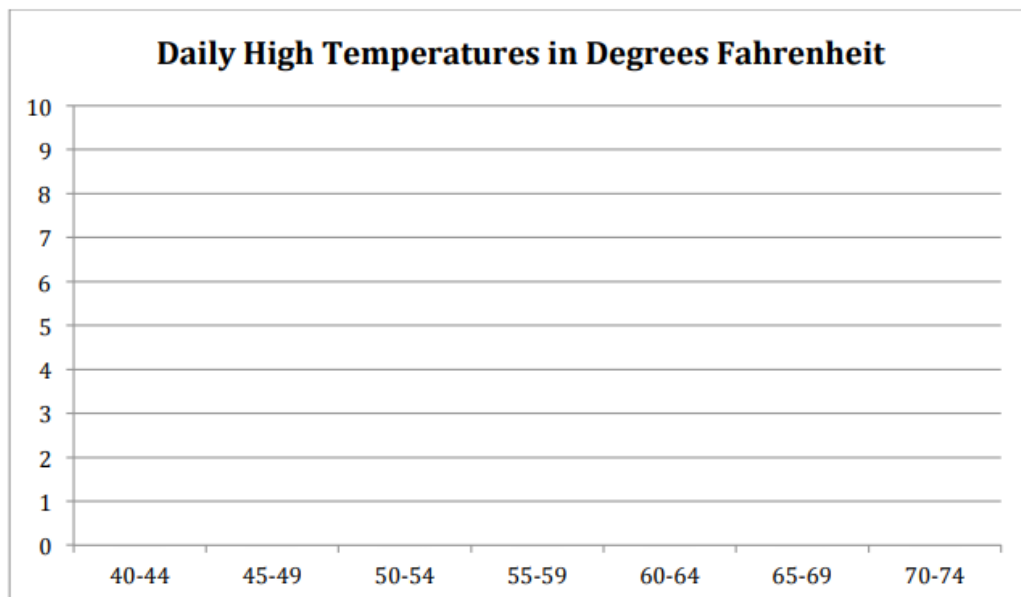
Line of Best Fit

7) A student who waits tables at a restaurant recorded the cost of the meals and the tips they received.

Meal Cost	Tip
$4.75	$0.50
$6.84	$0.90
$12.52	$1.50
$20.42	$3.00
$8.97	$1.00

    a. Based on your scatter plot, does this data appear to have a positive or negative correlation?

    b. Using a ruler, draw the "line of best fit" for the data you plotted.

    c. Determine the slope of your line-of-best-fit. Show your calculations.

    d. Give the Slope-Intercept form equation of your line of best fit.

    e. Based on the **graph of your line**, if somebody orders a meal costing $11.00, how much of a tip should the waiter expect to receive?

    f. Based on the **equation from part e**, what would the waiter expect to make if the meal cost $35.00?