- 1. In each of these statements tell whether descriptive or inferential statistics have been used.
- a. By 2040 at least 3.5 billion people will run short of water.
- b. Nine out of ten on-the-job fatalities are men.
- c. Expenditures for the cable industry were \$5.66 billion in 1996.
- d. The median household income for people aged 25-34 is \$35,888.
- e. Allergy therapy makes bees go away.
- f. Drinking decaffeinated coffee can raise cholesterol levels by7%.
- g. The national average annual medicine expenditure per person is \$1052.
- 2. Classify each as nominal-level, ordinal-level, interval-level, or ratio-level measurement.
- a. Pages in the 25 best-selling mystery novels.
- b. Rankings of golfers in a tournament.
- c. Temperatures inside 10 pizza ovens.
- d. Weights of selected cell phones.
- e. Salaries of the coaches in the NFL.
- f. Times required to complete a chess game.
- g. Ratings of textbooks (poor, fair, good, excellent)
- h. Number of amps delivered by battery chargers.
- i. Ages of children in a day care center.
- j. Categories of magazines in a physician's office (sports, women's, health, men's, news).

- 3. Classify each variable as qualitative or quantitative.
  - a. Marital status of nurses in a hospital.
  - b. Time it takes to run a marathon.
  - c. Weights of lobsters in a tank in a restaurant.
  - d. Colors of automobiles in a shopping center parking lot.
  - e. Ounces of ice cream in a large milkshake.
  - f. Capacity of the NFL football stadiums.
  - g. Ages of people living in a personal care home.
- 3. Classify each variable as discrete or continuous.
  - a. Number of pizzas sold by Pizza Express each day.
  - b. Relative humidity levels in operating rooms at local hospitals.
  - c. Number of bananas in a bunch at several local supermarkets.
  - d. Lifetimes (in hours) of 15 iPod batteries.
  - e. Weights of the backpacks of first graders on a school bus.
  - f. Number of students each day who make appointments with a math tutor at a local college.
  - g. Blood pressures of runners in a marathon.

## 4. Information from research studies is sometimes taken out of context. Explain why the claims of these studies might be suspect.

- a. Based on a recent telephone survey, 72% of those contacted shop online.
- b. Nursing school graduates from Fairview University earn on average \$33,456.
- c. Only 5% of the men surveyed wash the dishes after dinner.
- d. A recent study shows that high school dropouts spend less time on the Internet than those who graduated; therefore, the Internet raises your IQ.
- e. Most shark attacks occur in ocean water that is 3 feet deep; therefore, it is safer to swim in deep water.

4. The number of calories per serving for selected ready-to-eat cereals is listed here.

 130
 190
 140
 80
 100
 120
 220
 220
 110
 100

 210
 130
 100
 90
 210
 120
 200
 120
 180
 120

 190
 210
 120
 200
 130
 180
 260
 270
 100
 160

 190
 240
 80
 120
 90
 190
 200
 210
 190
 180

 115
 210
 110
 225
 190
 130
 130

Source: The Doctor's Pocket Calorie, Fat, and Carbohydrate Counter.

a. Construct a frequency distribution using 7 classes.

b. Draw a histogram, a frequency polygon, and an ogive for the data

5.	Construct	۵	pie	graph	using	the	following	data	from	۵	local	bakery.	
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Cookie Types	Number Sold			
Chocolate Chip	20			
Peanut Butter	15			
Oatmeal	30			
Sugar	10			

<b>6</b> . 15 86 62 28 31	<b>The number</b> 53 63 89 35 47	r of visitors 48 98 67 54 53	to the Histo 19 79 39 88 41	o <b>ric Museum for</b> 38 38 26 76	• 24 randomly	/ selected	l hours is	s shown.	
<b>The</b> 67 53 32	number of 62 55 29	<b>visitors to</b> 38 58 47	the Railroad 73 63 62	<b>Museum during</b> 34 47 29	<b>24 randomly</b> 43 42 38	<b>selected</b> 72 51 36	hours is 35 62 41	shown here	e

Construct a back to back stem and leaf plot.