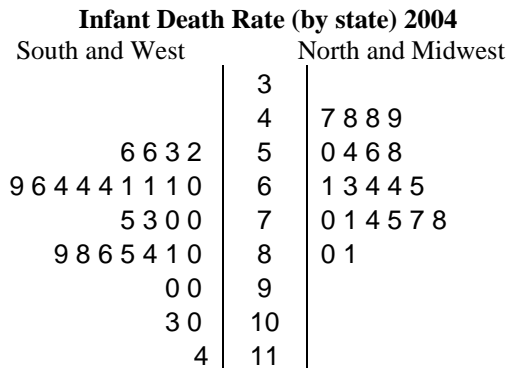


You need to show all work and be clear and concise in your explanations.

1. **INFANT DEATH RATE.** In 2004 the infant death rate in the United States was 6.8 deaths per 1000 live births. The Kaiser Family Foundation collected data from all 50 states and the District of Columbia, allowing us to look at different regions of the country. Since there are only 51 data values, a back-to-back stemplot is given. The plot compares infant death rates in the Northeast and Midwest to those in the South and West.



How do infant death rates compare for these regions? Make sure you cover the center, spread and shape.

2. **PHYSICAL FLEXIBILITY** Five hundred randomly selected middle-aged men and five hundred randomly selected young adult men were rated on a scale from 1 to 10 on their physical flexibility, with 10 being the most flexible. Their ratings appear in the frequency table below. For example, 17 middle-aged men had a flexibility rating of 1.

Physical Flexibility Rating	Frequency of Middle-Aged Men	Frequency of Young Adult Men
1	17	4
2	31	17
3	49	29
4	71	39
5	70	54
6	87	69
7	78	83
8	54	93
9	34	73
10	9	39

(a) Display these data graphically so that the flexibility of middle-aged men and young adult men can be easily compared.

(b) Based on an examination of your graphical display, write a few **sentences** comparing the flexibility of middle-aged men with the flexibility of young adult men.

3. In order to rate TV shows, phone surveys are sometimes used. Such a survey might record several variables, some of which are listed below. Which of these variables are categorical?

- I. The type of show being watched
- II. The number of persons watching the show
- III. The ages of persons watching the show
- IV. The name of the show being watched
- V. The number of times the show has been watched in the last month

(a) II, III, and V

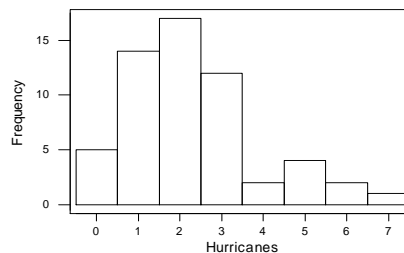
(b) I only

(c) I and V

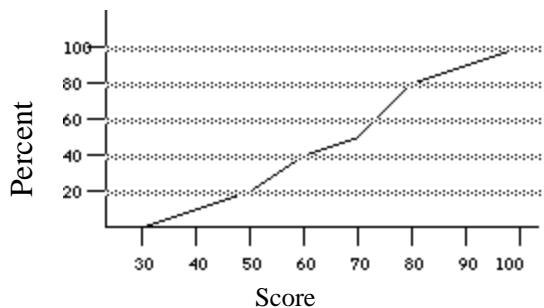
(d) I and IV

(e) None of the above choices describe the complete set of correct answers. The correct answers are _____

4. The histogram shows the number of major hurricanes that reached the east coast of the United States from 1944 to 2000. Describe the shape, center, and spread of the distribution.



5. Consider the following ogive of the scores of students in an introductory statistics course:

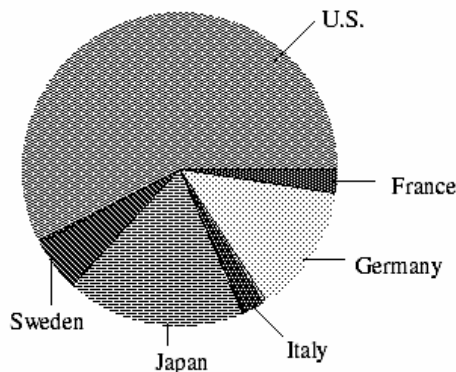


A grade of C or C+ is assigned to a student who scores between 55 and 70. The percentage of students that obtained a grade of C or C+ is:

- (a) 25% (b) 30% (c) 20% (d) 50% (e) 15%

6. Consumers Union measured the gas mileage in miles per gallon of 38 1978–1979 model automobiles on a special test track. The pie chart below provides information about the country of manufacture of the model cars used by Consumers Union. Based on the pie chart, we may conclude that:

- (a) Japanese cars get significantly lower gas mileage than cars of other countries. This is because their slice of the pie is at the bottom of the chart.
 (b) U.S. cars get significantly higher gas mileages than cars from other countries.
 (c) Swedish cars get gas mileages that are between those of Japanese and U.S. cars.
 (d) Mercedes, Audi, Porsche, and BMW represent approximately a quarter of the cars tested.
 (e) More than half of the cars in the study were from the United States.



7. A histogram of the educational level in number of years of schooling of the adult populations of the United States would have which of the following characteristics?

- I. Symmetry
 II. Clusters
 III. Skewness to the left

- (a) II only (b) I and II (c) I and III (d) II and III (e) I, II, and III