

## Quiz 1

Please work on this Quiz and submit the answers in the Quiz1 slot in the Assessment Area.

1. 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 is categorical?
  - a. the number of persons watching the show
  - b. the ages of all persons watching the show
  - c. the number of times the show has been watched in the last month
  - d. the name of the show (if any) being watched
2. A description of different houses on the market includes the following three variables. Which of the variables is quantitative?
  - a. the square footage of the house
  - b. the monthly gas bill
  - c. the monthly electric bill
  - d. all of the above

Use the following to answer questions 3 – 4.

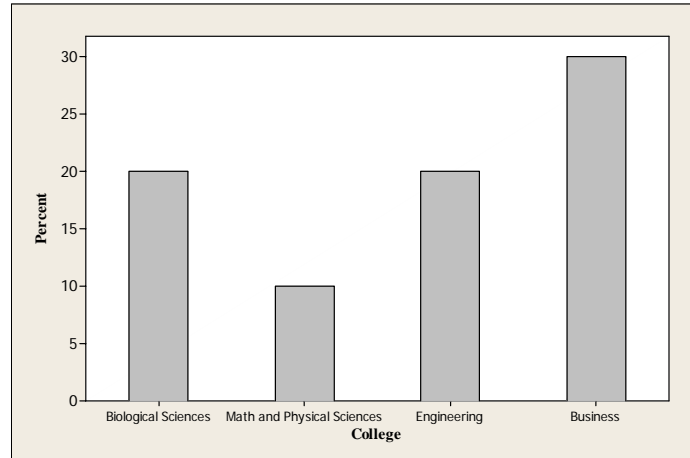
The following timeplot below gives the women's winning times in the Boston Marathon from 1972 to 2002.



3. In 1982 the winning time was
  - a. about 190 minutes.
  - b. about 170 minutes.
  - c. about 150 minutes.
  - d. about 140 minutes.
4. Which of the following is a true statement?
  - a. There is a fairly steady downward trend in the winning times until around 1982.
  - b. Since 1982 the winning times have been varying around 145 minutes.
  - c. The winning time in 1972 was about 190 minutes.
  - d. All of the above.

Use the following to answer questions 5– 6.

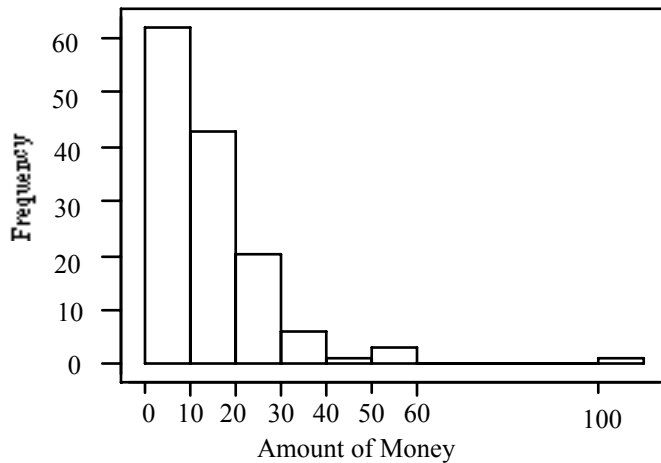
A large Midwestern University is divided into six colleges, with most students graduating from four of these colleges. The following bar chart gives the distribution of the percentage graduating from the four most popular colleges in 2003.



5. The percentage of students graduating from the two other colleges in 2003 was
- approximately 40%.
  - under 10%.
  - approximately 20%.
  - over 50%.
6. Which of the following is a correct statement?
- A timeplot of the 2003 distribution would be more informative.
  - The bar graph is skewed to the right.
  - The bar graph is skewed to the left.
  - It would be correct to make a pie chart if you added an “Other” category.

Use the following to answer questions 7-9.

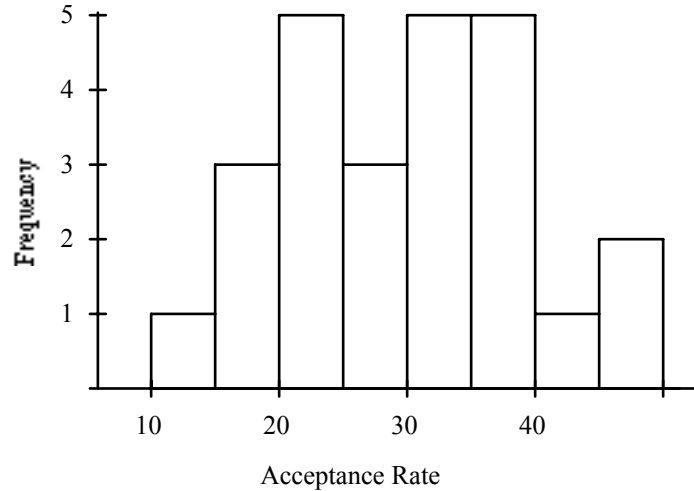
In a statistics class with 136 students, the professor records how much money each student has in his or her possession during the first class of the semester. The following histogram is of the data collected.



7. The *number* of students with under \$10 in their possession is closest to
- 40.
  - 50.
  - 60.
  - 70.
8. The histogram
- is skewed right.
  - has an outlier.
  - is asymmetric.
  - all of the above.
9. The *percentage* of students with over \$20 in their possession is
- about 10%.
  - about 20%.
  - about 30%.
  - over 40%.

Use the following to answer questions 10 – 11.

The following histogram represents the distribution of acceptance rates (percent accepted) among 25 business schools in 2004. In each class interval, the left endpoint is included but not the right, so the class intervals are  $10 \leq \text{rate} < 15$ ,  $15 \leq \text{rate} < 20$ , etc.



**10.** What percentage of the schools have an acceptance rate below 15%?

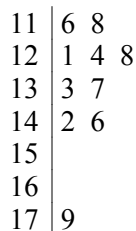
- a. 1%
- b. 4%
- c. 12%
- d. 16%

**11.** The number of schools with acceptance rates over 30% is

- a. 5.
- b. 12.
- c. 10.
- d. 13.

Use the following to answer questions 12-14.

For a Physics course containing 10 students, the maximum point total for the quarter was 200. The point totals for the 10 students are given in the following stemplot.



**12.** This stemplot is most similar to

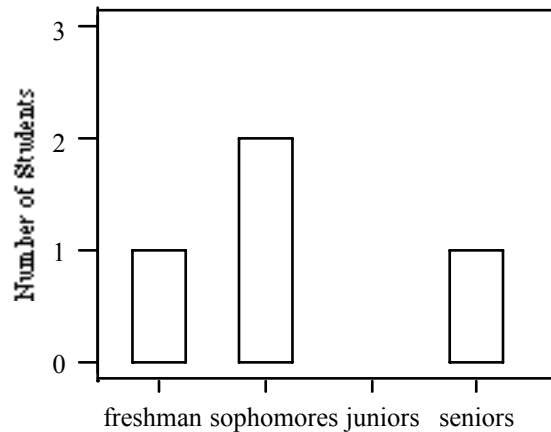
- a. a histogram with class intervals  $110 \leq \text{score} < 120$ ,  $120 \leq \text{score} < 130$ , etc.
- b. a time plot of the data with the observations taken in increasing order.
- c. a boxplot of the data.

d. reporting the five-point summary for the data, with the mean.

13. To which of the following data sets does this stemplot correspond?
- all integers between 116 and 179
  - 1, 2, 3, 4, 6, 6, 7, 8, 8, 9
  - 16, 18, 21, 24, 28, 33, 37, 42, 46, 79
  - 116, 118, 121, 124, 128, 133, 137, 142, 146, 179
14. The lowest score in the class as a percentage of the total possible points is
- 58%.
  - 75%.
  - 90%.
  - 116%.

Use the following to answer questions 15 – 16.

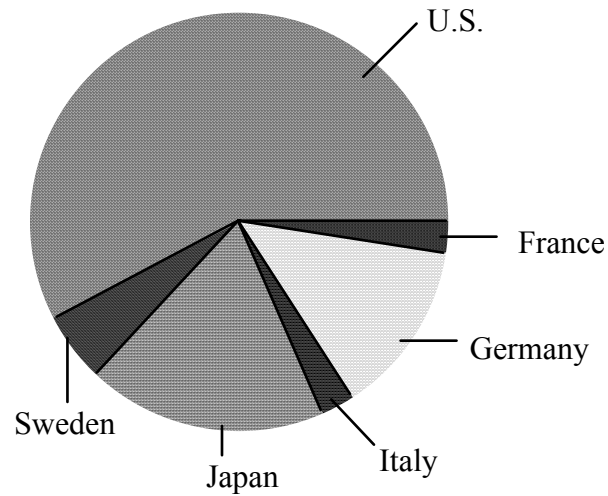
The following is a bar graph of class standing for a Finance seminar containing 6 students who are either freshman, sophomores, juniors, or seniors. In the bar graph, the bar for the juniors has been omitted.



15. The percentage of students in the seminar who are not juniors is
- 20%.
  - 33%.
  - 67%.
  - 80%.
16. The number of students in the seminar who are juniors is
- 1.
  - 2.
  - 3.
  - 4.

Use the following to answer questions 17 – 18.

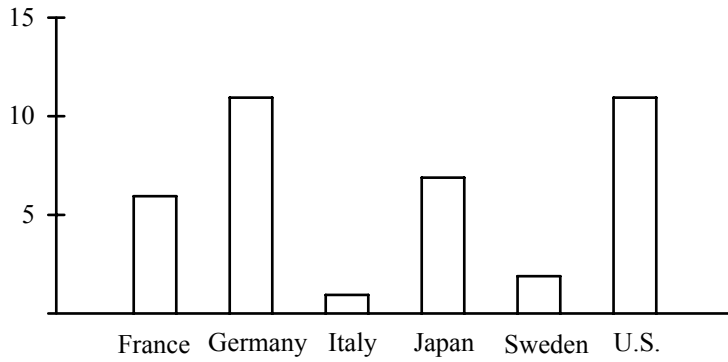
Consumers Union measured the gas mileage per gallon of 38 1998-99 model automobiles on a special test track. The following pie chart provides information about the country of manufacture of the model cars that Consumers Union used.



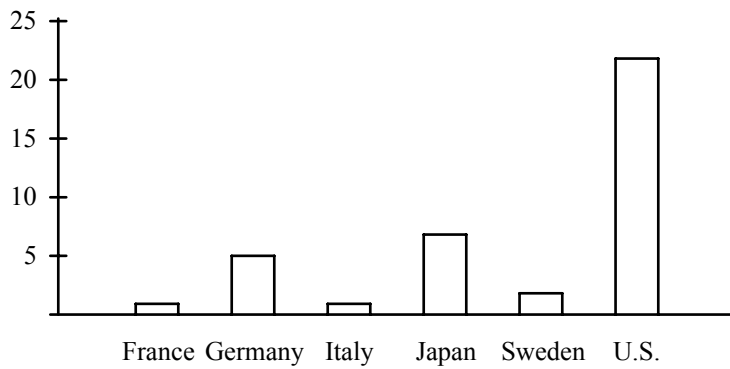
17. Based on this pie chart, we may conclude that
- Japanese cars get significantly lower gas mileage than cars of other countries. This is because their slice of the pie is at the bottom of the chart.
  - more than half of the cars in the study were from the U.S.
  - Swedish cars get gas mileages that are between those of Japanese and U.S. cars.
  - Mercedes Benz, Audi, Porsche, and BMW represent approximately a quarter of the cars tested.

18. Which of the following bar graphs is equivalent to the pie chart?

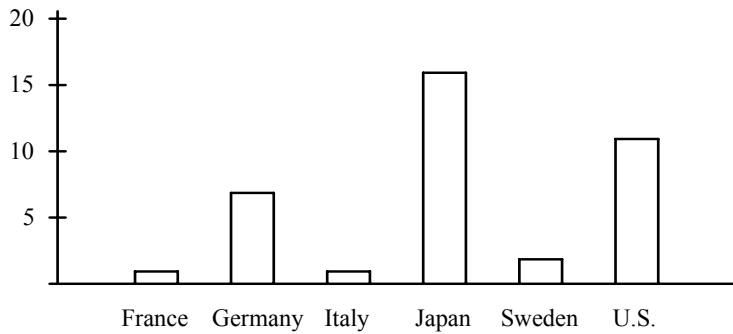
a.



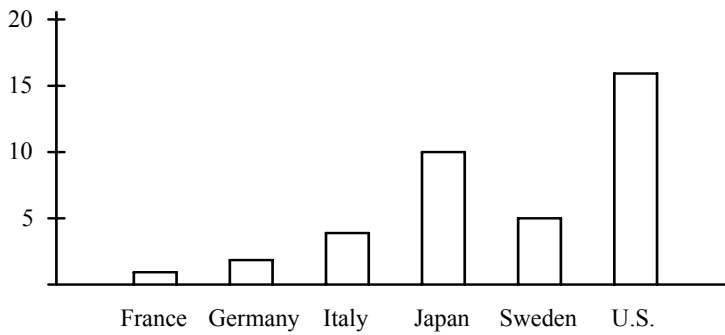
b.



c.



d.





19. Submit the correct option for Question 1.20 on the page 26 of the text

20. Submit the correct option for Question 1.22 on the page 26 of the text

