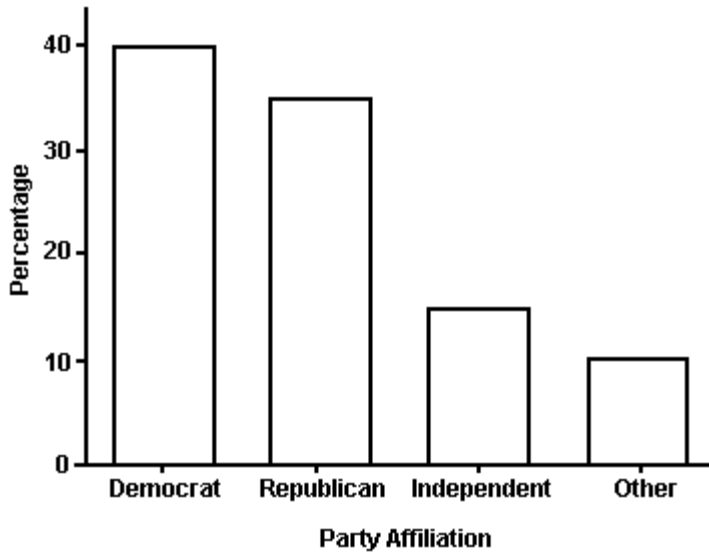


9)



The bar graph shows the political affiliation of 1,000 registered U.S. voters. What percentage of the voters belonged to one of the traditional two parties (Democratic or Republican)?

- A) 25% B) 35% C) 75% D) 40%

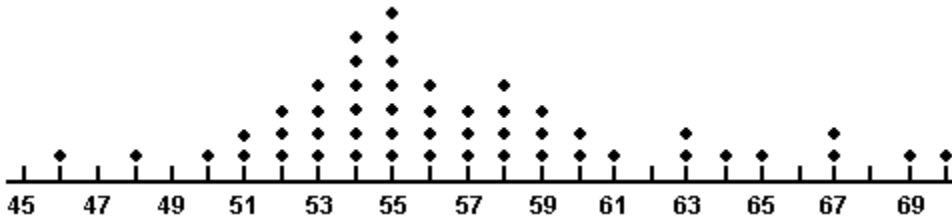
10) A data set contains the observations 8, 7, 4, 3, 1. Find $(\sum x)^2$.

- A) 46 B) 23 C) 529 D) 139

11) A data set contains the observations 8, 6, 2, 1, 5. Find $\sum x^2$.

- A) 484 B) 44 C) 22 D) 130

12) A dot plot of the speeds of a sample of 50 cars passing a policeman with a radar gun is shown below.



What proportion of the motorists were driving above the posted speed limit of 65 miles per hour?

- A) 0.02 B) 0.08 C) 1 D) 0.10

Provide an appropriate response.

13) The scores of the top ten finishers in a recent golf tournament are listed below. Find the mode score.

71 67 67 72 76 72 73 68 72 72

- A) 76 B) 73 C) 67 D) 72

Solve the problem.

- 14) A survey was conducted to determine how people feel about the quality of programming available on television. Respondents were asked to rate the overall quality from 0 (no quality at all) to 100 (extremely good quality). The stem-and-leaf display of the data is shown below.

Stem	Leaf
3	4 9
4	0 3 4 7 8 9 9 9
5	0 1 1 2 3 4 5
6	1 2 5 6 6
7	1 9
8	
9	6

What percentage of the respondents rated overall television quality as very good (regarded as ratings of 80 and above)?

- A) 1% B) 24% C) 4% D) 6%

Provide an appropriate response.

- 15) The scores of the top ten finishers in a recent golf tournament are listed below. Find the median score.

67 67 68 71 72 72 72 72 73 76

- A) 67 B) 71 C) 72 D) 73

- 16) The scores of the top ten finishers in a recent golf tournament are listed below. Find the mean score.

71 67 67 72 76 72 73 68 72 72

- A) 68 B) 71 C) 72 D) 67

Solve the problem.

- 17) The output below displays the mean and median for the state high school dropout rates in 1998 and 2002.

	Drop 1998	Drop 2002
N	51	51
MEAN	28.38	26.81
MEDIAN	27.57	25.69

Interpret the 2002 median dropout rate of 25.69.

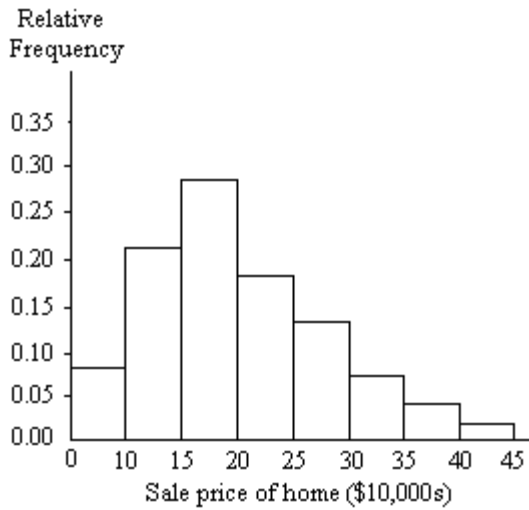
- A) Most of the 51 states had a dropout rate close to 25.69%.
B) The most frequently observed dropout rate of the 51 states was 25.69%.
C) Half of the 51 states had a dropout rate below 25.69%.
D) Half of the 51 states had a dropout rate of 25.69%.

- 18) Elaine gets quiz grades of 90, 83, and 64. She gets a 69 on her final exam. Find the weighted mean if the quizzes each count for 20% and the final exam counts for 40% of the final grade.

- A) 75.0 B) 74.0 C) 79.2 D) 76.5

A graphical display of a data set is given. Identify the overall shape of the distribution .

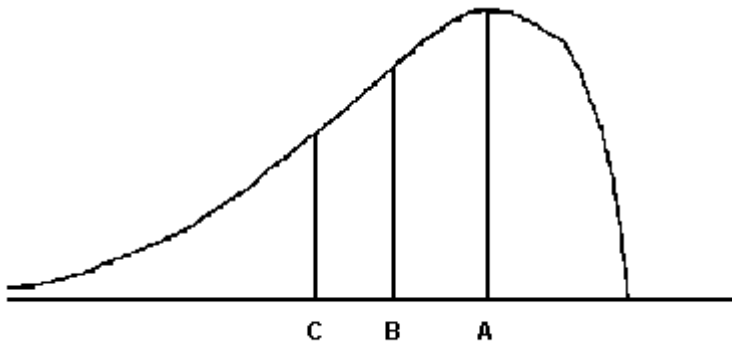
19) A relative frequency histogram for the sale prices of homes sold in one city during 2006 is shown below.



- A) Left skewed B) J-shaped C) Right skewed D) Reverse J-shaped

Solve the problem.

20)



For the distribution drawn here, identify the mean, median, and mode.

- A) A = median, B = mode, C = mean B) A = mode, B = mean, C = median
 C) A = mean, B = mode, C = median D) A = mode, B = median, C = mean

Find the mean of the data summarized in the given frequency distribution.

21) The highway speeds of 100 cars are summarized in the frequency distribution below. Find the mean speed.

Speed (mph)	Cars
30-39	5
40-49	18
50-59	50
60-69	17
70-79	10

- A) 54.5 mph B) 60.9 mph C) 55.4 mph D) 58.2 mph

Solve the problem.

- 22) A shoe company reports the mode for the shoe sizes of men's shoes is 12. Interpret this result.
- A) The most frequently occurring shoe size for men is size 12
 - B) Half of all men's shoe sizes are size 12
 - C) Half of the shoes sold to men are larger than a size 12
 - D) Most men have shoe sizes between 11 and 13.
- 23) Many firms use on-the-job training to teach their employees computer programming. Suppose you work in the personnel department of a firm that just finished training a group of its employees to program, and you have been requested to review the performance of one of the trainees on the final test that was given to all trainees. The mean of the test scores is 76. Additional information indicated that the median of the test scores was 81. What type of distribution most likely describes the shape of the test scores?
- A) skewed to the left
 - B) symmetric
 - C) unable to determine with the information given
 - D) skewed to the right
- 24) The ages of five randomly chosen professors are 63, 42, 69, 66, and 41. Calculate the sample variance of these ages.

Provide an appropriate response.

- 25) The heights (in inches) of 10 adult males are listed below. Find the sample standard deviation of the data set.

70 72 71 70 69 73 69 68 70 71

- A) 3
- B) 2.38
- C) 1.49
- D) 70

- 26) The heights (in inches) of 20 adult males are listed below. Find the range of the data set.

70 72 71 70 69 73 69 68 70 71
67 71 70 74 69 68 71 71 71 72

- A) 5
- B) 6
- C) 6.5
- D) 7

Answer the question True or False.

- 27) For any quantitative data set, $\sum(x - \bar{x}) = 0$.

- A) True
- B) False

Solve the problem.

- 28) The mean \bar{x} of a data set is 36.71, and the sample standard deviation s is 3.22. Find the interval representing measurements within one standard deviation of the mean.

- A) (27.05, 46.37)
- B) (33.49, 39.93)
- C) (35.71, 37.71)
- D) (30.27, 43.15)

- 29) A small computing center has found that the number of jobs submitted per day to its computers has a distribution that is approximately mound-shaped and symmetric, with a mean of 85 jobs and a standard deviation of 7. Where do we expect approximately 95% of the distribution to fall?

- A) between 78 and 92 jobs per day
- B) between 99 and 106 jobs per day
- C) between 71 and 99 jobs per day
- D) between 64 and 106 jobs per day

Answer Key

Testname: PRACTICE-CH1&2

- 1) B
- 2) A
- 3) The population of interest to the guidance counselor is all community colleges in the United States. The variable of interest is the annual tuition cost of the community college.
- 4) A
- 5) B
- 6) C
- 7) C
- 8) A
- 9) C
- 10) C
- 11) D
- 12) B
- 13) D
- 14) C
- 15) C
- 16) B
- 17) C
- 18) A
- 19) C
- 20) D
- 21) C
- 22) A
- 23) A

$$24) s^2 = \frac{\sum(x - \bar{x})^2}{n - 1}$$

$$\bar{x} = \frac{\sum x}{n} = \frac{63 + 42 + 69 + 66 + 41}{5} = 56.2$$

$$s^2 = \frac{(63 - 56.2)^2 + (42 - 56.2)^2 + (69 - 56.2)^2 + (66 - 56.2)^2 + (41 - 56.2)^2}{5 - 1}$$
$$= 184.70$$

- 25) C
- 26) D
- 27) A
- 28) B
- 29) C
- 30) D
- 31) B
- 32) D
- 33) B
- 34) history z-score = 0.67; physics z-score = 4.05; The student performed better on the physics test.
- 35) 12%