

Unit 2 Review

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Use the given frequency distribution to find the

- (a) class width.
- (b) class midpoints of the first class.
- (c) class boundaries of the first class.

1) Miles (per day)

Class	Frequency, f
1 - 2	9
3 - 4	22
5 - 6	28
7 - 8	15
9 - 10	4

A) (a) 2

(b) 1.5

(c) 0.5-2.5

B) (a) 1

(b) 1

(c) 1-2

C) (a) 2

(b) 1

(c) 1-2

D) (a) 1

(b) 1.5

(c) 0.5-2.5

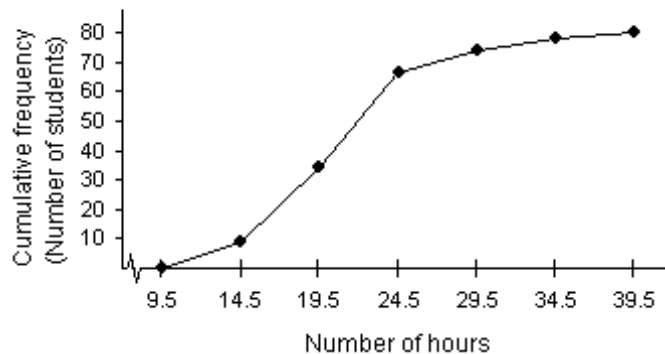
1) _____

Provide an appropriate response.

2) Use the ogive below to approximate the cumulative frequency for 24 hours.

2) _____

Leisure Time of College Students



A) 63

B) 27

C) 75

D) 17

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Use the given frequency distribution to construct a cumulative frequency distribution and an ogive.

3) Miles (per day)

Class	Frequency, f
1 - 2	9
3 - 4	22
5 - 6	28
7 - 8	15
9 - 10	4

3) _____

Use the given frequency distribution to construct a frequency histogram, a relative frequency histogram and a frequency polygon.

4) Weight (in pounds) 4) _____

Class	Frequency, f
135 - 139	6
140 - 144	4
145 - 149	11
150 - 154	15
155 - 159	8

The heights (in inches) of 30 adult males are listed below.

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

- 5) Construct a frequency distribution, a relative frequency distribution, and a cumulative frequency distribution using five classes. 5) _____
- 6) Construct a frequency histogram using five classes. 6) _____
- 7) Construct a relative frequency histogram using five classes. 7) _____
- 8) Construct a frequency polygon using five classes. 8) _____
- 9) Construct a ogive using five classes. 9) _____

Provide an appropriate response.

- 10) The data below represent the smoking prevalence among U.S. adults over a 35-year period. Use a time series chart to display the data. Describe any trends shown. 10) _____

Year	1965	1985	1990	1995	2000
Percent of Smokers	42	30	25	25	23

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

For the given data , construct a frequency distribution and frequency histogram of the data using five classes. Describe the shape of the histogram as symmetric, uniform, negatively skewed, or positively skewed.

- 11) Data set: systolic blood pressures of 20 randomly selected patients at a blood bank 11) _____

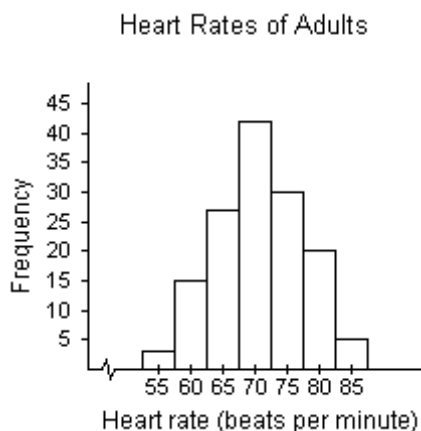
135 120 115 132 136 124 119 145 98 110
 125 120 115 130 140 105 116 121 125 108

- A) symmetric B) positively skewed
 C) negatively skewed D) uniform

Provide an appropriate response.

12) Use the histogram below to approximate the mean heart rate of adults in the gym.

12) _____



- A) 70 B) 70.8 C) 1425.7 D) 31.6

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

13) _____

71 67 67 72 76 72 73 68 72 72

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

14) A student receives test scores of 62, 83, and 91. The student's final exam score is 88 and homework score is 76. Each test is worth 20% of the final grade, the final exam is 25% of the final grade, and the homework grade is 15% of the final grade. What is the student's mean score in the class?

14) _____

- A) 76.6 B) 90.6 C) 80.6 D) 85.6

Approximate the mean of the grouped data.

15)

15) _____

Weight (in pounds)	Frequency
135-139	5
140-144	14
145-149	13
150-154	7
155-159	11

- A) 10 B) 150 C) 148 D) 146

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

16) Why do data entries need to be ordered before the median can be found?

16) _____

17) What is the difference between using μ and \bar{x} to represent a mean?

17) _____

- 18) In a random sample, 10 students were asked to compute the distance they travel one way to school to the nearest tenth of a mile. The data is listed below. Compute the range, standard deviation and variance of the data. 18) _____

1.1 5.2 3.6 5.0 4.8 1.8 2.2 5.2 1.5 0.8

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 19) SAT verbal scores are normally distributed with a mean of 489 and a standard deviation of 93. Use the Empirical Rule to determine what percent of the scores lie between 303 and 582. 19) _____
A) 83.9% B) 34% C) 81.5% D) 68%
- 20) A competency test has scores with a mean of 82 and a standard deviation of 2. A histogram of the data shows that the distribution is normal. Between what two values do about 99.7% of the values lie? 20) _____
A) Between 80 and 84 B) Between 78 and 86
C) Between 76 and 88 D) Between 74 and 90
- 21) The average IQ of students in a particular calculus class is 110, with a standard deviation of 5. The distribution is roughly bell-shaped. Use the Empirical Rule to find the percentage of students with an IQ above 120. 21) _____
A) 13.5% B) 2.5% C) 15.85% D) 11.15%
- 22) Adult IQ scores have a bell-shaped distribution with a mean of 100 and a standard deviation of 15. Use the Empirical Rule to find the percentage of adults with scores between 70 and 130. 22) _____
A) 68% B) 99.7% C) 95% D) 100%

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 23) The cholesterol levels (in milligrams per deciliter) of 30 adults are listed below. Draw a box-and-whisker plot that represents the data. 23) _____

154 156 165 165 170 171 172 180 184 185
189 189 190 192 195 198 198 200 200 200
205 205 211 215 220 220 225 238 255 265

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 24) 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 and standard deviation of the test scores are 74 and 2, respectively, and the distribution of scores is bell-shaped and symmetric. Suppose the trainee in question received a score of 69. Compute the trainee's z-score. 24) _____
A) $z = -0.91$ B) $z = 0.91$ C) $z = -2.50$ D) $z = 2.5$

- 25) The cholesterol levels (in milligrams per deciliter) of 30 adults are listed below. Find the percentile that corresponds to cholesterol level of 195. 25) _____

154 156 165 165 170 171 172 180 184 185
189 189 190 192 195 198 198 200 200 200
205 205 211 215 220 220 225 238 255 265

A) 12

B) 33

C) 58

D) 50

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 26) A student's score on the SAT-1 placement test for U.S. history is in the 90th percentile. 26) _____
What can you conclude about the student's test score?