Name			

chowing t	•	ibution is a grouping of quantitative data into overlapping classes ber of observations in each class.	1)
Answer:	True	False	
Answer:	rrue	raise	
2) A frequen	cy table	for qualitative data has class limits.	2)
Answer:	True	False	
•		e gender of students attending a college, the number of classes in a	3)
frequency	table de	epends on the number of students.	
Answer:	True	False	
	•	ributions, classes are mutually exclusive if each individual, object, or	4)
measuren	ient is in	ncluded in only one category.	
Answer: 0	True	False	
5) In a bar c	hart, the	horizontal axis is usually labeled with the values of a qualitative	5)
variable.			٥,
Answer: 0	True	False	
6) In a bar cl	hart, the	heights of the bars represent the frequencies in each class.	6)
Answer: 0	True	False	
7) The midp	oint of a	a class is halfway between the lower and upper limits.	7)
Answer:		False	ŕ
o) A class in	terval c	an be determined by subtracting the lower limit of a class from the	8)
•		next higher class.	8)
		False	
Answer: 0	C	uency distribution to a relative frequency distribution, divide each class	9)
	rt a frequ		
9) To conve	•	sum of the class frequencies.	
9) To conve	by the s	False	
9) To convert frequency Answer:	by the s	False	10
9) To convert frequency Answer: • 0) To convert	by the some True	-	10

	12) A pie chart shows th	ne relative frequency in each class.	12)	
	Answer: <a> True	False		
	13) To construct a pie cl	hart, relative class frequencies are used to graph the "slices" of the	ne 13)	
	Answer: True	False		
	_	ency distribution is used when we want to determine how many ve or below certain values.	14)	
	Answer: V True	False		
	15) A frequency polygo distributions.	n is a very useful graphic technique when comparing two or mor	e 15)	
	Answer: O True	False		
JUL	TIPLE CHOICE. Choose to	he one alternative that best completes the statement or answers the qu	estion.	
	-	ns of first-year insurance brokers are \$1,270, \$1,310, \$1,680, \$1	,380, 16)	
	A) a frequency dis C) a histogram. Answer: B	180, and \$1,420. These figures are referred to as stribution. B) raw data. D) a frequency polygon.		
	•	omputer operators shows monthly incomes of \$1,950, \$1,775, 795, \$1,890, \$1,925, and \$1,810. What are these ungrouped num	17)	
	A) Raw data	B) Class frequencies		
	C) Histograms Answer: A	D) Class limits		
	•	cted using a quantitative, ratio variable, what is true about a	18)	
	A) The number of B) Upper and low C) The "5 to the k	on that summarizes the data? classes is equal to the number of variable values. er class limits must be calculated. rule" can be applied. be used to summarize the data.		
	frequency table that A) A pie chart can B) The number of C) The upper and D) The "5 to the k	cted using a qualitative, nominal variable, what is true about a summarizes the data? be used to summarize the data. classes is equal to the number of variable's values plus 2. lower class limits must be calculated. rule" can be applied.	19)	
	Answer: A			

20) When data are collected using a qualitative, nominal variable (e.g., male or female), what	20)	
is true about a frequency table that summarizes the data?	_	

- A) The upper and lower class limits must be calculated.
- B) The "2 to the k rule" can be applied.
- C) The number of classes corresponds to the number of a variable's values.
- D) Class midpoints can be computed.

Answer: C

21) A student was interested in the cigarette-smoking habits of college students and collected
from an unbiased random sample of students. The data are summarized in the following to

Males	50
Females	75
Males who smoke	20
Males who do not smoke	30
Females who smoke	25
Females who do not smoke	50

What is wrong with this frequency table?

- A) The number of males does not equal the sum of males that smoke and do not smoke.
- B) There are too many classes.
- C) The classes are not mutually exclusive.
- D) Class limits cannot be computed.

Answer: C

22) A student was interested in the cigarette-smoking habits of college students and collected from an unbiased random sample of students. The data are summarized in the following to

Males who smoke	20
Males who do not smoke	30
Females who smoke	25
Females who do not smoke	50

What type of chart best represents the frequency table?

A) Box plot

B) Frequency polygon

c) Bar chart

D) Scatter plot

23)	A student was interested in the cigarette-smoking habits of college students and collected	23)
	from an unbiased random sample of students. The data are summarized in the following $\ensuremath{t_{\text{i}}}$	
	Malao mika amala	
	Males who smoke20Males who do not smoke30	
	Females who smoke 25	
	Females who do not smoke 50	
	remaies who do not smoke 30	
	What type of chart best represents the relative class frequencies?	
	A) Scatter plot B) Pie chart	
	C) Frequency polygon D) Box plot	
	Answer: B	
24)	When a class interval is expressed as 100 up to 200,	24)
	A) observations with values of 200 are excluded from the class.	
	B) observations with values of 200 are included in the class.	
	C) observations with values of 100 are excluded from the class.	
	D) the class interval is 99.	
	Answer: A	
25)	For a relative frequency distribution, relative frequency is computed as	25)
,	A) the class frequency divided by the number of observations.	·
	B) the class width divided by the class interval.	
	c) the class frequency divided by the class interval.	
	D) the class midpoint divided by the class frequency.	
	Answer: A	
241	The relative frequency for a class represents the	26)
20)	A) class width.	
	B) class midpoint.	
	C) percentage of observations in the class.	
	D) class interval.	
	Answer: C	
27)	A group of 100 students was surveyed about their interest in a new International Studies	27)
	program. Interest was measured in terms of high, medium, or low. In the study, 30	
	students responded high interest, 40 students responded medium interest, and 30 students responded law interest. What is the relative frequency of students with high interest?	
	responded low interest. What is the relative frequency of students with high interest? A) 0.40 B) 0.50 C) 0.030 D) 0.30	
	MI U.TU DI U.JU UI U.UJU DI U.JU	

Answer: D

28) A group of 100 students Interest was measured i responded high interest responded low interest. student interest?	n terms of high, m , 50 students respo	nedium, or low. In the stonded medium interest, way to illustrate the related	and 20 students and the frequency of	28)
A) Use a box plot.		•	tive frequency polygon.	
C) Use a pie chart.		D) Use a frequer	icy table.	
Answer: C				
29) The monthly salaries of They ranged from a low into seven classes, what	of \$1,040 to a hi	gh of \$1,720. If we wan		29)
A) \$100	B) \$50	c) \$200	D) \$150	
Answer: A				
30) A student was studying		=	=	30)
population. The survey or a Republican. This quality A) political preference B) the categories are C) students generally D) the categories are gas Answer: B	uestion is flawed le is a continuous vot not exhaustive. don't know their p	because variable. political preferences.	nselves as a Democrat	
31) A student was studying	the political party	preferences of a univer	sity's student	31)
population. The survey —for example, Democra illustrate the frequencie A) box plot. C) bar chart. Answer: C	at, Republican, Li	bertarian, or another par	ty. The best way to	
A . 1 1 .	.1 11.2 1	c c ·		
32) A student was studying population. The survey —for example, Democr illustrate the relative free	instrument asked at, Republican, Li	students to identify thei ibertarian, or another pa on is a	r political preferences	32)
A) bar chart.		B) histogram.		
C) pie chart.		D) frequency pol	lygon.	
Answer: C				

Ages	Number of Ages
20 up to 30	16
30 up to 40	25
40 up to 50	51
50 up to 60	80
60 up to 70	20
70 up to 80	8

A) Frequency distribution

B) Frequency polygon

C) Histogram

D) Cumulative frequency distribution

Answer: A

34) For the following distribution of heights, what are the limits for the class with the greatest 34) ______ frequency?

Heights	60" up to 65"	65" up to 70"	70" up to 75"
Frequency	10	70	20

A) 65 and 69

B) 69.5 and 74.5

c) 65 and up to 70

D) 64 and up to 70

Answer: C

35) In a frequency distribution, the number of observations in a class is called the class

35)

- A) midpoint.
- B) frequency.
- C) array.
- D) interval.

Answer: B

36) Why are unequal class intervals sometimes used in a frequency distribution?

36)

- A) To avoid the need for midpoints.
- B) To avoid a large number of classes with very small frequencies.
- C) For the sake of variety in presenting the data.
- D) To make the class frequencies smaller.

37) The number of employees less than the upper limit of each class at Lloyd's Fast Food Em₁ 37) is shown in the following table:

Ages	Cumulative Number
18 up to 23	6
23 up to 28	19
28 up to 33	52
33 up to 38	61
38 up to 43	65

What is it called?

A) A histogram

- B) A frequency polygon
- C) A cumulative frequency distribution
- D) A pie chart

Answer: C

38) Here is a sample distribution of hourly earnings in Paul's Cookie Factory:

38)

Hourly Earning	\$6 up to \$9	\$9 up to \$12	\$12 up to \$15
Frequency	16	42	10

The limits of the class with the smallest frequency are

A) \$11.75 and \$14.25.

B) \$12.00 and up to \$15.00.

c) \$12.00 and up to \$14.00.

D) \$6.00 and \$9.00.

Answer: B

39) Refer to the following distribution of commissions:

39)

Monthly Commissions	Class Frequencies
\$600 up to \$800	3
800 up to 1,000	7
1,000 up to 1,200	11
1,200 up to 1,400	12
1,400 up to 1,600	40
1,600 up to 1,800	24
1,800 up to 2,000	9
2,000 up to 2,200	4

What is the relative frequency for salespeople who earn from \$1,600 up to \$1,800?

- A) 0.24
- B) 0.02
- C) 0.20
- D) 0.024

Monthly Commissions	Class Frequencies
\$600 up to \$800	3
800 up to 1,000	7
1,000 up to 1,200	11
1,200 up to 1,400	12
1,400 up to 1,600	40
1,600 up to 1,800	24
1,800 up to 2,000	9
2,000 up to 2,200	4

To plot a cumulative frequency distribution, the first coordinate would be

A)
$$X = 0$$
, $Y = 600$.

B)
$$X = 3$$
, $Y = 600$.

C)
$$X = 500$$
, $Y = 3$.

D)
$$X = 600$$
, $Y = 0$.

Answer: D

41) Refer to the following distribution of commissions:

Monthly Commissions	Class Frequencies
\$600 up to \$800	3
800 up to 1,000	7
1,000 up to 1,200	11
1,200 up to 1,400	12
1,400 up to 1,600	40
1,600 up to 1,800	24
1,800 up to 2,000	9
2,000 up to 2,200	4

What is the relative frequency of salespeople who earn \$1,600 or more?

- A) 27.5%
- B) 30.8%
- c) 29.5%
- D) 25.5%

42) Refer to the following distribution of commissions:

Monthly Commissions	Class Frequencies
\$600 up to \$800	3
800 up to 1,000	7
1,000 up to 1,200	11
1,200 up to 1,400	12
1,400 up to 1,600	40
1,600 up to 1,800	24
1,800 up to 2,000	9
2,000 up to 2,200	4

For the preceding distribution, what is the midpoint of the class with the greatest frequenc

A) 1,700

B) 1,400

c) 1,500

D) The midpoint cannot be determined.

Answer: C

43) Refer to the following distribution of commissions:

Monthly Commissions	Class Frequencies
\$600 up to \$800	3
800 up to 1,000	7
1,000 up to 1,200	11
1,200 up to 1,400	12
1,400 up to 1,600	40
1,600 up to 1,800	24
1,800 up to 2,000	9
2,000 up to 2,200	4

What is the class interval?

- A) 300
- B) 200
- c) 400
- D) 3,500

44) Refer to the following wage breakdown for a garment factory:

Hourly Wages	Number of employees
\$6 up to \$7	18
7 up to 10	36
10 up to 13	20
13 up to 16	6

What is the class interval for the preceding table of wages?

A) \$3

B) \$2

c) \$4

D) \$5

Answer: A

45) Refer to the following wage breakdown for a garment factory:

45)

Hourly Wages	Number of employees
\$6 up to \$7	18
7 up to 10	36
10 up to 13	20
13 up to 16	6

What is the class midpoint for the class with the greatest frequency?

- A) \$14.50
- B) \$5.50
- c) \$11.50
- D) \$8.50

Answer: D

46) Refer to the following wage breakdown for a garment factory:

Hourly Wages	Number of employees
\$6 up to \$7	18
7 up to 10	36
10 up to 13	20
13 up to 16	6

What are the class limits for the class with the smallest frequency?

A) 13 and up to 16

B) 4 and up to 7

c) 12.5 and 15.5

D) 3.5 and 6.5

Answer: A

47)	Refer	to the	follo	wing	distribu	ıtion	of :	ages:

47)

Ages	Frequency
40 up to 50	10
50 up to 60	28
60 up to 70	12

For this distribution of ages, what is the relative class frequency for the lowest class?

- A) 0.20
- B) 0.10
- C) 0.18
- D) 0.50

Answer: A

48) Refer to the following distribution of ages:

Ages	Frequency
40 up to 50	10
50 up to 60	28
60 up to 70	12

What is the class interval?

- A) 10.5
- B) 11

c) 9

D) 10

Answer: D

49) Refer to the following distribution of ages:

49)		
マ ノ)		

Ages	Frequency
40 up to 50	10
50 up to 60	28
60 up to 70	12

What is the class midpoint of the highest class?

A) 65

B) 64

c) 54

D) 55

Answer: A

50) Refer to the following information from a frequency distribution for heights of college women recorded to the nearest inch: the first two class midpoints are 62.5" and 65.5". What is the class interval?



A) 1"

B) 2"

c) 2.5"

D) 3"

Answer: D

-		a frequency distribution for heights of college first two class midpoints are 62.5" and 65.5".	51)
	s limits for the lowest c		
A) 61 and up to	64	B) 62 and 65	
c) 62 and up to	64	D) 62 and 63	
Answer: A			
52) Refer to the follow	wing information from a	a frequency distribution for heights of college	52)
women recorded	to the nearest inch: the	first two class midpoints are 62.5" and 65.5".	
What are the clas	s limits for the third cla	ss?	
A) 66 and 68		B) 64 and up to 67	
c) 67 and up to	70	D) 67 and 69	
Answer: C			
53) Refer to the follo	st of Textbooks	Frequency	53)
	\$25 up to 35	2	
	35 up to 45	5	
	45 up to 55	7	
	55 up to 65	20	
	65 up to 75	16	
What is the relativ	•	22 \$25 up to \$35 class?	
	ve class frequency for the	-	
A) 0.05	•	ne \$25 up to \$35 class? C) 0.10 D) 0.04	
	ve class frequency for the	-	
A) 0.05	ve class frequency for the B) 0.02	-	54)

Cost of Textbooks	Frequency
\$25 up to 35	2
35 up to 45	5
45 up to 55	7
55 up to 65	20
65 up to 75	16

W	hat	is	the	class	midpo	int for	the \$45	up	to	\$55	class?	,
---	-----	----	-----	-------	-------	---------	----------	----	----	------	--------	---

A) 49.5

в) 50.5

c) 50

D) 49

Cost of Textbooks	Frequency
\$25 up to 35	2
35 up to 45	5
45 up to 55	7
55 up to 65	20
65 up to 75	16

What are the class limits for the class with the highest frequency?

- A) 55 up to 64
- B) 54 up to 64
- c) 55 up to 64.5
- D) 55 up to 65

Answer: D

56) Refer to the following frequency distribution of days absent during a calendar year by em₁ 56) of a manufacturing company:

Days Absent	Number of employees
0 up to 3	60
3 up to 6	31
6 up to 9	14
9 up to 12	6
12 up to 15	2

How many employees were absent for 3 up to 6 days?

A) 29

B) 2

c) 31

D) 14

Answer: C

57) Refer to the following frequency distribution of days absent during a calendar year by emp 57) of a manufacturing company:

Days Absent	Number of employees
0 up to 3	60
3 up to 6	31
6 up to 9	14
9 up to 12	6
12 up to 15	2

How many employees were absent fewer than six days?

A) 60

B) 46

- c) 91
- D) 31

58) Refer to the following frequency distribution of days absent during a calendar year by emp	58)	
of a manufacturing company:	-	

Days Absent	Number of employees
0 up to 3	60
3 up to 6	31
6 up to 9	14
9 up to 12	6
12 up to 15	2

How many employees were absent six or more days?

A) 8

B) 31

c) 22

D) 4

Answer: C

59) Refer to the following frequency distribution of days absent during a calendar year by emp 59) of a manufacturing company:

Days Absent	Number of employees
0 up to 3	60
3 up to 6	31
6 up to 9	14
9 up to 12	6
12 up to 15	2

How many employees were absent for 6 up to 12 days?

A) 12

B) 20

c) 8

D) 17

Answer: B

60) Refer to the following breakdown of responses to a survey of room service in a hotel:

60)

Response	Frequency
Not satisfied	20
Satisfied	40
Highly satisfied	60

What is the class interval for this frequency table?

A) 10

B) 20

c) 40

D) None apply

Answer: D

141	D - C	. C . 11	1 1. 1	of responses	4	C		- 14-1-
611	Refer to the	e tollowing	nreakdown	ot rechoncec	to a survey	OT room	service in	a noter.
OI,	itelet to the	c rono wing	orcandown v	or responses	to a survey	OI IOOIII	SCI VICC III	a noter.

Response	Frequency
Not satisfied	20
Satisfied	40
Highly satisfied	60

What is the class with the greatest frequency?

A) Satisfied

B) Not satisfied

c) Highly satisfied

D) None apply

Answer: C

62) Refer to the following breakdown of responses to a survey of room service in a hotel:

62)	

61) _

Response	Frequency
Not satisfied	20
Satisfied	40
Highly satisfied	60

What percentage of the responses indicated that customers were satisfied?

- A) 33%
- B) 40%
- c) 100%
- D) 50%

Answer: A

63) Refer to the following breakdown of responses to a survey of room service in a hotel:

Response	Frequency
Not satisfied	20
Satisfied	40
Highly satisfied	60

What type of chart should be used to describe the frequency table?

A) A bar chart

B) A frequency polygon

C) A histogram

D) A pie chart

Answer: A

64)	Refer t	to the	following	breakdown	of responses	to a survey of room	n service in	a hotel:
,								

Response	Frequency
Not satisfied	20
Satisfied	40
Highly satisfied	60

What type of chart should be used to show relative class frequencies?

A) A histogram

B) A bar chart

c) A pie chart

D) A frequency polygon

Answer: C

65) Refer to the following breakdown of responses to a survey of "Are you concerned about b tracked while connected to the Internet?"

Response	Frequency
Very concerned	140
Somewhat concerned	40
No concern	20

What is the class interval for the preceding frequency table?

A) 40

B) 20

c) 10

D) None apply

Answer: D

66) Refer to the following breakdown of responses to a survey of "Are you concerned about b 66) tracked while connected to the Internet?"

Response	Frequency
Very concerned	140
Somewhat concerned	40
No concern	20

What is the class with the greatest frequency?

A) No concern

B) Very concerned

c) Somewhat concerned

D) None apply

67) Refer to the following breakdown of responses to a survey of "Are you concerned about b	67)	
tracked while connected to the Internet?"	-	

Response	Frequency
Very concerned	140
Somewhat concerned	40
No concern	20

What percentage of the responses indicated that users were somewhat concerned?

- A) 70%
- B) 40%
- c) 100%
- D) 20%

Answer: D

68) Refer to the following breakdown of responses to a survey of "Are you concerned about b 68) tracked while connected to the Internet?"

Response	Frequency
Very concerned	140
Somewhat concerned	40
No concern	20

What type of chart should be used to describe the frequency table?

A) A histogram

B) A bar chart

c) A pie chart

D) A frequency polygon

Answer: B

69) Refer to the following breakdown of responses to a survey of "Are you concerned about b 69) tracked while connected to the Internet?"

Response	Frequency
Very concerned	140
Somewhat concerned	40
No concern	20

What type of chart should be used to show relative class frequencies?

A) A histogram

B) A pie chart

c) A frequency polygon

D) A bar chart

70) Refer to the following breakdown of responses to a survey of "How confident are you that	70)	
saved enough to retire?"	-	

Response	Frequency
Very confident	63
Somewhat confident	135
Not very confident	99
Don't know	3

What	is the	class	interval	for	the	preceding	frec	menev	table	9
vv mat	is the	Class	miervar	101	uie	preceding	Hec	luency	table	

A) 40

B) 20

c) 10

D) None apply

Answer: D

71) Refer to the following breakdown of responses to a survey of "How confident are you that 71) saved enough to retire?"

Response	Frequency
Very confident	63
Somewhat confident	135
Not very confident	99
Don't know	3

What is the class with the greatest frequency?

A) Very confident

B) Not very confident

C) Somewhat confident

D) Don't know

Answer: C

72) Refer to the following breakdown of responses to a survey of "How confident are you that 72) saved enough to retire?"

Response	Frequency
Very confident	63
Somewhat confident	135
Not very confident	99
Don't know	3

What percentage of the responses indicated that users were very confident?

A) 45%

B) 63%

c) 21%

D) 33%

Response	Frequency	
Very confident	63	
Somewhat confident	135	
Not very confident	99	
Don't know	3	
C) A pie chart Answer: D Refer to the following breakdown of saved enough to retire?"	D) A bar chart f responses to a survey of "How confident are you that	74) _
Response	Frequency	
Response Very confident	Frequency 63	
_		
Very confident	63	
Very confident Somewhat confident	63 135	
Very confident Somewhat confident Not very confident	63 135 99 3	

B) normal frequency table.

D) cumulative frequency table.

76) A table summarizing a set of data showing the fraction of the total number of items in

several classes is a

A) frequency table.

Answer: C

C) relative frequency table.

76) _____

77) In order to convert class frequency to relative class frequency, we	77)
A) divide the frequency of the class by the midpoint.	
B) divide the frequency of the class by the sample size.	
C) divide the sample size by the frequency of the class.	
D) divide the midpoint of the class by the sample size.	
Answer: B	
78) In constructing a frequency distribution, the approximate class interval is computed as	78)
A) (minimum value – maximum value)/(sample size).	
B) (maximum value – minimum value)/(number of classes).	
c) (maximum value)/(number of classes – sample size).	
D) (maximum value – minimum value)/(sample size).	