Name:_____ Class:_____ Date:_____

Quiz Chapter 24

Indicate the answer choice that best completes the statement or answers the question.

	1	2	3	4	5	6	7	8	9	10
a										
b										
c										
d										
e										

Name:_____ Class:_____ Date:_____

Quiz Chapter 24

A study of drug addicts in Amsterdam recorded how often each addict had recently injected drugs and whether or not the addict was infected with HIV, the virus that causes AIDS. Here is a two-way table of the numbers of addicts in each condition:

		HIV Yes	**HIV No**
	Daily	32	45
Inject?	**Less than daily**	20	18
	No	18	23

1. How many addicts did the study gather data from?

a. 156 ← the sum of all numbers

b. 86

c. 77

d. 70

e. Can't tell from the table.

Name:_____ Class:_____ Date:_____

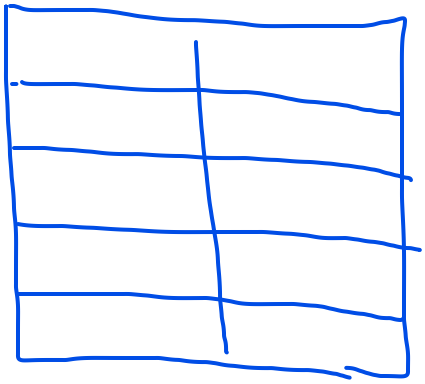
Quiz Chapter 24

A professor wants to know if students who regularly attend lecture and read the textbook perform differently in her introductory statistics course than the students who only read the textbook. The results are as follows:

Observed

Grade	Textbook only	Textbook and lecture	
A	11	20	31
B	18	19	37
C	23	22	45
D	21	17	38
F	16	5	21
	89	83	172 ← table total

Expected



2. What is the chi-square statistic for this table?

a. 5.99
b. 7.78
c. 8.65
d. 9.49
e. 13.28

Need a computer code!

Name:_____ Class:_____ Date:_____

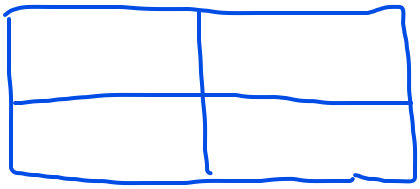
Quiz Chapter 24

A sample of 123 respondents is asked, “Should corporations attempt to use their financial resources to influence public policy, especially with respect to social issues?” The responses are as follows:

Observed

	Yes	No	
State A	34	25	59
State B	46	18	64
	80	43	123

Expected



3. The chi-square statistic for this table has how many degrees of freedom?

a. 1
b. 2
c. 3
d. 4
e. 6

r = # rows $(= 2)$

C = # columns $(= 2)$

$df = (C-1)(r-1) = 1 \times 1 = 1$

4. What is the chi-square statistic for this table?

a. 2.741
b. 1
c. 0.9276
d. 4
e. 2

Need a computer code!

Name:_____ Class:_____ Date:_____

Quiz Chapter 24

A professor wants to know if students who regularly attend lecture and read the textbook perform differently in her introductory statistics course than the students who only read the textbook. The results are as follows:

Grade	Textbook only	Textbook and lecture
A	11	20
B	18	19
C	23	22
D	21	17
F	16	5

5. The *P*-value for this table's chi-square statistic is
   a. less than 0.001.
   b. between 0.001 and 0.01.
   c. between 0.01 and 0.05.
   d. between 0.05 and 0.10.
   e. between 0.10 and 0.15.

Need a computer code!

Name:_____ Class:_____ Date:_____

Quiz Chapter 24

6. During basketball practice, Ulrich made 80% of his free throws, while Franz made only 70%. Ulrich also did better in the game, making 60%, while Franz made only 50%. Here are the data:

	Practice *Attempted*	**Practice** *Made*	**Game** *Attempted*	**Game** *Made*
Ulrich	10	8	20	12
Franz	50	35	10	5

Overall (practice plus game),

X a. Ulrich made a higher percent of his free throws than Franz did.

X b. Franz made a higher percent of his free throws than Ulrich did.

✓ c. both Ulrich and Franz made exactly the same percent of their free throws.

X d. Ulrich made 70% of his free throws. 40%

X e. Both A and D are true.

	P	G	
U	30	20	50
F	60	40	100
	90	60	150

$U(\text{made}) = \frac{20}{50} = \frac{2}{5}$

$F(\text{made}) = \frac{40}{100} = \frac{2}{5}$

Name:_____ Class:_____ Date:_____

Quiz Chapter 24

A study of college football players' involvement with sports agents involved interviews with a sample of college sports information directors. One question concerns revamping rules concerning timing and level of player-agent contact. Here is a two-way table of the results:

	Describe the level of interest		
	Not interested	Some interest	Very interested
NCAA, Div. I	18	42	60
NCAA, non-Div. I	48	40	37
non-NCAA	22	28	37

88 + 110 + 134 = 332

7. How many sports information directors were interviewed?

a. 125

b. 332

c. 4

d. 9

total

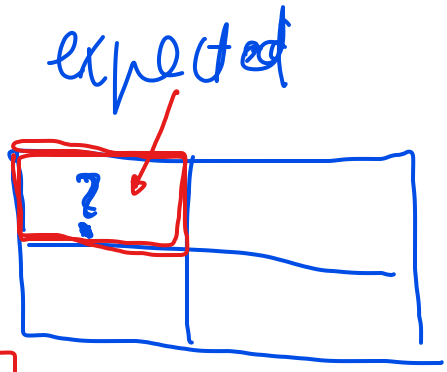
Name:_____ Class:_____ Date:_____

Quiz Chapter 24

A sample of 123 respondents is asked, "Should corporations attempt to use their financial resources to influence public policy, especially with respect to social issues?" The responses are as follows:

observed

	Yes	No	
State A	34	25	59
State B	46	18	64
	80	43	123



8. What is the expected number of respondents in State A who said *Yes*?

a. 59
b. 34
c. 38.37
d. 80
e. 231

$? = \frac{80 \times 59}{123} = 38.37398$

≈ 38

9. The *P*-value for this table's chi-square statistic is

a. less than 0.001.
b. between 0.01 and 0.05.
c. between 0.05 and 0.10.
d. between 0.10 and 0.25.
e. greater than 0.25.

Need a computer code!

Name:_____ Class:_____ Date:_____

Quiz Chapter 24

A study of college football players' involvement with sports agents involved interviews with a sample of college sports information directors. One question concerns revamping rules concerning timing and level of player-agent contact. Here is a two-way table of the results:

	Describe the level of interest		
	Not interested	Some interest	Very interested
NCAA, Div. I	18	42	60
NCAA, non-Div. I	48	40	37
non-NCAA	22	28	37

10. The chi-square statistic for this two-way table is $\chi^2 = 19.4$ with P-value < 0.001. We can conclude that

a. there is very strong evidence that type of college and interest in revamping student athlete/agent contact rules are related in the population of all sports information directors.

b. there is very strong evidence that type of college and interest in revamping student athlete/agent contact rules are related among the sports information directors in this sample.

significance tests are about populations based on the information in the sample

Quiz Chapter 24

c. we lack strong evidence that type of college and interest in revamping student athlete/agent contact rules are related in the population of all sports information directors.

d. we lack strong evidence that type of college and interest in revamping student athlete/agent contact rules are related among the sports information directors in this sample.

Name:_____ Class:_____ Date:_____

Quiz Chapter 24

Answer Key

1. a

2. c

3. a

4. a

5. d

6. c

7. b

8. c

9. c

10. a