

**SOCI 102 - Exam 3 - FA13 Practice****Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. In a cross tabulation, the intersection of a row and column is referred to as:  
 a. the node  
 b. the intersection  
 c. a cell  
 d. the intercept
- \_\_\_\_\_ 2. A relationship between two variables in which the variables vary in the opposite direction (i.e., one increases while the other decreases, or vice versa) is referred to as a:  
 a. stronger  
 b. weaker  
 c. negative  
 d. positive

Consider the following hypothetical data on each respondent's region of U.S. residence and whether or not they have health insurance of some kind. Construct a bivariate table containing the appropriate percentages for each cell in the table.

Person	Region	Health Insurance
1	South	Yes
2	South	Yes
3	North	No
4	North	No
5	North	Yes
6	North	Yes
7	North	Yes
8	South	No
9	South	No
10	South	No
11	North	Yes
12	North	Yes
13	North	No
14	North	No
15	South	No

- \_\_\_\_\_ 3. How many respondents were from the South?  
 a. 5  
 b. 6  
 c. 7  
 d. 8
- \_\_\_\_\_ 4. How many respondents had insurance?  
 a. 5  
 b. 6  
 c. 7  
 d. 8
- \_\_\_\_\_ 5. What percentage of respondents from the North had insurance?  
 a. 33.33%  
 b. 46.67%  
 c. 55.56%  
 d. 71.43%

- \_\_\_\_\_ 6. What percentage of respondents from the South had insurance?  
 a. 13.33% c. 33.33%  
 b. 28.57% d. 46.67%
- \_\_\_\_\_ 7. What percentage of respondents with insurance were from the North?  
 a. 33.33% c. 55.56%  
 b. 46.67% d. 71.43%
- \_\_\_\_\_ 8. What percentage of respondents with insurance were from the South?  
 a. 13.33% c. 33.33%  
 b. 28.57% d. 46.67%
- \_\_\_\_\_ 9. What percentage of respondents had insurance and were from the North?  
 a. 33.33% c. 55.56%  
 b. 46.67% d. 71.43%
- \_\_\_\_\_ 10. What percentage of respondents had insurance and were from the South?  
 a. 13.33% c. 33.33%  
 b. 28.57% d. 46.67%
- \_\_\_\_\_ 11. What percentage of respondents from the North did not have insurance?  
 a. 26.67% c. 55.00%  
 b. 44.44% d. 53.33%
- \_\_\_\_\_ 12. What percentage of respondents from the South did not have insurance?  
 a. 26.67% c. 50.00%  
 b. 40.00% d. 66.67%
- \_\_\_\_\_ 13. What percentage of respondents with no insurance were from the North?  
 a. 26.67% c. 55.00%  
 b. 44.44% d. 53.33%
- \_\_\_\_\_ 14. What percentage of respondents with no insurance were from the South?  
 a. 26.67% c. 50.00%  
 b. 40.00% d. 66.67%
- \_\_\_\_\_ 15. What percentage of respondents had no insurance and were from the North?  
 a. 26.67% c. 55.00%  
 b. 44.44% d. 53.33%
- \_\_\_\_\_ 16. What percentage of respondents had no insurance and were from the South?  
 a. 26.67% c. 50.00%  
 b. 40.00% d. 66.67%

The following data were obtained from the General Social Survey.

Position on Abortion	Religious Affiliation	
	Protestant	Catholic
Support	156	86
Oppose	296	139

- \_\_\_\_\_ 17. Calculate the marginals for the table above. The row marginal values are \_\_\_\_\_ for “Support” and \_\_\_\_\_ for “Oppose”.
- a. 242, 435 c. 296, 139  
 b. 156, 86 d. 452, 225

- \_\_\_\_ 18. Calculate the marginals for the table above. The column marginal values are \_\_\_\_ for “Protestant” and \_\_\_\_ for “Catholic”.
- |             |             |
|-------------|-------------|
| a. 242, 435 | c. 296, 139 |
| b. 156, 86  | d. 452, 225 |
- \_\_\_\_ 19. Calculate the expected frequencies for the table above. The expected frequency for Protestans that Support abortion is  $f_e =$  \_\_\_\_\_
- |           |           |
|-----------|-----------|
| a. 80.43  | c. 161.57 |
| b. 144.57 | d. 290.43 |
- \_\_\_\_ 20. Calculate the expected frequencies for the table above. The expected frequency for Catholics that Support abortion is  $f_e =$  \_\_\_\_\_
- |           |           |
|-----------|-----------|
| a. 80.43  | c. 161.57 |
| b. 144.57 | d. 290.43 |
- \_\_\_\_ 21. Calculate the expected frequencies for the table above. The expected frequency for Catholics that Oppose abortion is  $f_e =$  \_\_\_\_\_
- |           |           |
|-----------|-----------|
| a. 80.43  | c. 161.57 |
| b. 144.57 | d. 290.43 |
- \_\_\_\_ 22. Calculate the expected frequencies for the table above. The expected frequency for Protestans that Oppose abortion is  $f_e =$  \_\_\_\_\_
- |           |           |
|-----------|-----------|
| a. 80.43  | c. 161.57 |
| b. 144.57 | d. 290.43 |
- \_\_\_\_ 23. The chi-square test requires the following assumption:
- a population distribution that is approximately normal
  - random sampling
  - a standard deviation equal to 1.0
  - no extreme or outlying observations
- \_\_\_\_ 24. The observation that two variables are unrelated in the population is referred to as:
- |                             |                           |
|-----------------------------|---------------------------|
| a. statistical independence | c. statistical inference  |
| b. statistical significance | d. statistical dependence |
- \_\_\_\_ 25. The number of degrees of freedom for a chi-square test is calculated as:
- |          |                          |
|----------|--------------------------|
| a. $n-1$ | c. $(rows-1)(columns+1)$ |
| b. $n+1$ | d. $(rows-1)(columns-1)$ |
- \_\_\_\_ 26. Chi-square values are never \_\_\_\_\_.
- |             |                     |
|-------------|---------------------|
| a. positive | c. greater than 100 |
| b. negative | d. zero             |

**Short Answer**

Hypothetical data are provided below on relationship between sex and marital satisfaction. The table includes expected frequencies.

	Sex		
Marital Satisfaction	Male	Female	Row Total
Satisfied	309	255	564
$f_e$	247	317	
Unsatisfied	107	278	385
$f_e$	169	216	
Column Total	416	533	949

27. Calculate a Chi-square statistic for the data in the table above.

Chi-square = \_\_\_\_\_

df = \_\_\_\_\_

critical value for Chi-square at  $\alpha < .05$  = \_\_\_\_\_

critical value for Chi-square at  $\alpha < .01$  = \_\_\_\_\_

Is there a significant association between Sex and Marital Satisfaction? YES NO

How would you report these results \_\_\_\_\_