

Sample Test Questions 4

The answers are at the bottom

1. A researcher compares three modes of instruction; traditional classroom versus online instruction, versus a combination of traditional and online instruction. The dependent variable is students' test scores. What significance test is most appropriate?

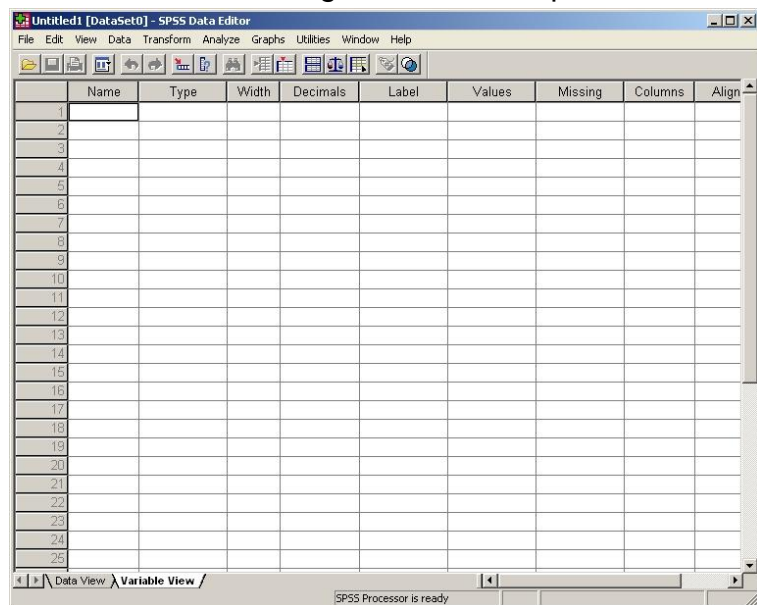
- A. Chi square
- B. crosstabs
- C. one-way ANOVA
- D. two-way ANOVA

2. Rank ordered data is most conducive to which type of significance test?

- A. correlation
- B. t-test
- C. Pearson r
- D. Spearman rho

3. In Variable View in SPSS you can do all of the following in SPSS, except:

- A. assign value labels
- B. enter data
- C. choose numeric or string variables
- D. create a new variable
- E. choose nominal, ordinal, or scale data



4. H1: Women over the age of 50 who take calcium supplements will have significantly fewer hip fractures than women of the same age who do not take calcium supplements. What statistical test should be used for each hypothesis?

- A. Pearson r
- B. one-way ANOVA
- C. t-test
- D. crosstabs

5. Based on the SPSS results at right, what is the relationship between anxiety level and self esteem?

- A. no correlation, nonsignificant
- B. strong correlation and statistically significant
- C. low to moderate negative correlation and statistically significant
- D. low to moderate negative correlation and nonsignificant
- E. low to moderate positive correlation and statistically significant

→ **Correlations**

		assessing anxiety scale	rosenberg self-esteem scale
assessing anxiety scale	Pearson Correlation	1.000	-.378**
	Sig. (2-tailed)	.	.000
	N	229	229
rosenberg self-esteem scale	Pearson Correlation	-.378**	1.000
	Sig. (2-tailed)	.000	
	N	229	230

** Correlation is significant at the 0.01 level (2-tailed).

6. Variables that correlate statistically but are not related meaningfully (like ice cream sales and drownings) are referred to as:

- A. statistical artifacts
- B. spurious relationships
- C. statistical outliers
- D. interaction effects
- E. Pearson poltergeists

7. Which of the following p values poses the greatest risk of a Type I error?

- A. $p < .05$
- B. $p < .01$
- C. $p < .001$
- D. insufficient information to tell

8. Guess what you think the correlation would look like for people's ages (from 15-60) and how often they read a newspaper.

- A. positive and linear
- B. negative and linear
- C. curvilinear; U shaped
- D. curvilinear; inverted U
- E. impossible to determine

9. The following display shows the number of teachers in an elementary school, based on the teachers' sex and the grades taught

	female	male
K-3rd grade	15	3
4th-6 th grade	10	8

This display is called a/an:

- A. frequency table
- B. bar graph
- C. histogram
- D. scatterplot

10. A researcher measures psychic ability by having participants guess one of four colors on the back of a card. The researcher records each guess as "right" or "wrong." What statistical test should be used to determine if a person's accuracy exceeds what would be expected by chance?

- A. chi-square
- B. Pearson r
- C. one-way ANOVA
- D. independent samples t-test
- E. crosstabs

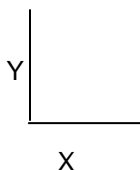
11. If a researcher analyzes data using a two-way ANOVA, the researcher probably has:

- A. one independent variable
- B. two independent variables
- C. three independent variables
- D. four independent variables

12. A researcher compares lifelong vegetarians versus meat-eaters to see if one group lives significantly longer than the others. What statistical test should be used to see if diet has a significant effect on longevity?

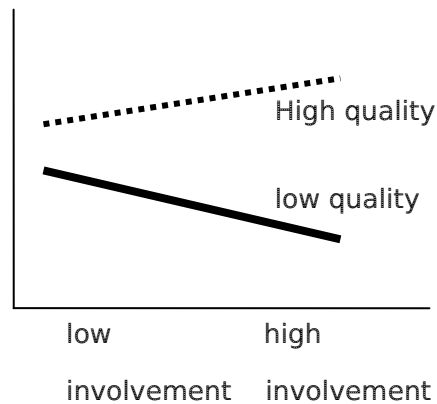
- A. chi-square
- B. t-test
- C. one way ANOVA
- D. crosstabs
- E. insufficient information to tell

13. In the graph below, which axis represents the independent variable? Answer "X" or "Y."



14. The graph below best illustrates the finding that:

- A. low quality arguments are just as effective as high quality arguments under conditions of low listener involvement.
- B. when listeners have low involvement in an issue, the quantity of arguments is more persuasive, but when listeners have high involvement in an issue, the quality of the arguments is more persuasive.
- C. under conditions of high involvement, high quality arguments are significantly more persuasive than low quality arguments
- D. There is no significant difference in the persuasiveness of high versus low quality arguments, based on listener involvement



15. Suppose you have a data set that includes freshman, sophomores, juniors, and seniors. You only want to analyze the data for freshman and seniors to see if seniors' grades are significantly higher than those of freshman. What function should you use in SPSS to exclude the GPAs of sophomores and juniors?

- A. analyze > descriptive statistics
- B. graphs > chart builder
- C. data > select cases
- D. analyze > compare means > independent samples t-test

16. A researcher compares three types of sweeteners (cane sugar, corn syrup, honey) to see if there is a significance difference in how well they suppress hunger. Three hundred subjects are randomly assigned to one of three taste conditions. An hour later they rate their hunger level on a scale of 1-10. Which test should be used to determine if one sweetener is better than the others at suppressing hunger?

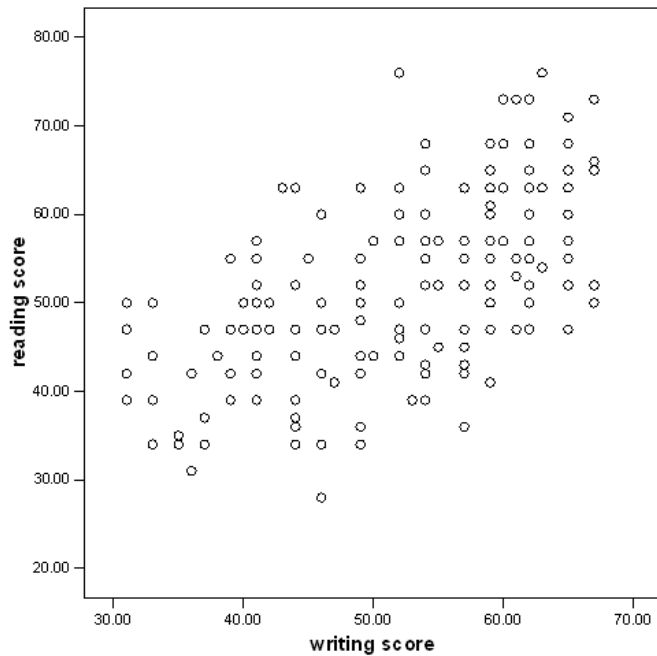
- A. crosstabs
- B. Pearson r
- C. Chi square
- D. t-test
- E. one-way ANOVA

17. A researcher has categorized juvenile delinquents into three categories, based on population density; urban delinquents, suburban delinquents, and rural delinquents. The researcher wants to know if there is a difference in recidivism rates between the three categories. What function in SPSS should be used?

- A. analyze > descriptive statistics
- B. analyze > compare means > independent samples t-test
- C. data > select cases
- D. analyze > compare means > one-way Analysis of Variance

18. The graph at right depicts:

- A. a significant difference
- B. a positive correlation
- C. a negative correlation
- D. a curvilinear relationship



19. An experimenter performs a one-way ANOVA and obtains a statistically significant result. Next, the researcher should conduct:

- A. a power test
- B. a post hoc test
- C. an effect size test
- D. a two-way ANOVA

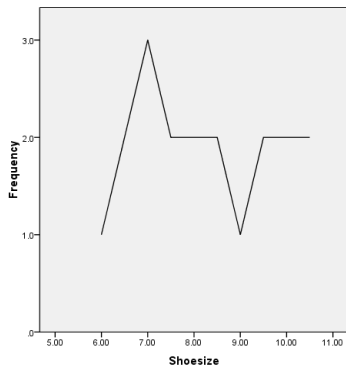
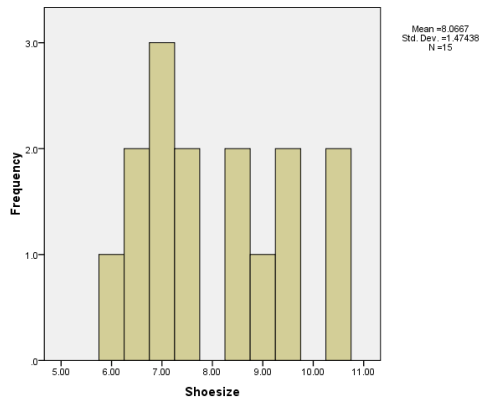
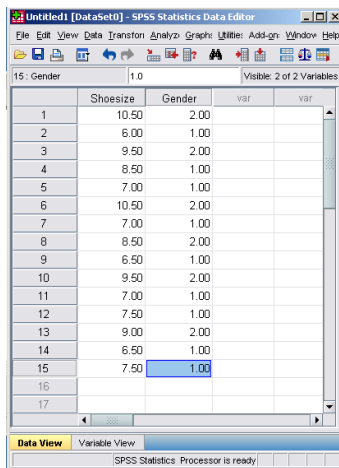
20. Histograms are appropriately used when the data collected are:

- A. nominal or ordinal
- B. ordinal or interval
- C. interval or ratio
- D. ordinal and ratio

21. Which method of graphically depicting data requires interval/ratio data?

- A. pie chart
- B. histogram
- C. bar chart
- D. line graph

22. Which of the graphs below is a frequency polygon?



Shoe Size					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6.0	1	6.7	6.7	6.7
	6.5	2	13.3	13.3	20.0
	7.0	3	20.0	20.0	40.0
	7.5	2	13.3	13.3	53.3
	8.5	2	13.3	13.3	66.7
	9.0	1	6.7	6.7	73.3
	9.5	2	13.3	13.3	86.7
	10.5	2	13.3	13.3	100.0
	Total	15	100.0	100.0	
Total		15	100.0		

Answers: 1C, 2D, 3B, 4C, 5C, 6B, 7A, 8B, 9A, 10A, 11B, 12B, 13X, 14C, 15C, 16E, 17B, 18B, 19B, 20C, 21B, 22 lower left