1. What does ANOVA stand for in applied statistics?

2. Which of these analyses could best use the ANOVA?

3. What is a fundamental assumption for effective use of ANOVA?

4. The probability of making a Type I error is denoted using the Greek symbol ____?

5. Which of the following conditions usually indicates that there are differences in the parametric means among the groups that were sampled for an ANOVA?

6. Which of the following conditions usually indicates that there are differences between in the parametric means between the populations from which samples were drawn for a t-test for equality of means?

7. You need to compare the parametric means of groups. How many groups can you compare using a t-test for the equality of means?

8. You need to compare the means of groups. How many groups can you compare using an ANOVA for the equality of parametric means?

9. We can use a t-test for the equality of parametric means when there are ____?

10. The frequency distribution of the numbers of votes cast in the 2332 election for each of three political parties on Mars Colony is known. Political scientists want to know if there are grounds for describing the distribution of votes cast in the 2340 election for those same parties as different from those of 2332. What statistical procedure could the political scientists use to test the hypothesis that the observed distribution of 2340 is the same as the distribution of votes based on the results from 2332?

11. A statistician computes the t-test to compare the means of two samples. What theoretical distribution does she use to compute the probability that observed differences are due solely to random sampling?

12. In an ANOVA for comparing the mean golabian coefficient for samples of numutian ore, exogeologists find that F equals 1.8 and that P(H0) equals 0.424. How would the scientists mark this result using the conventional symbols for significance?

13. In an ANOVA for comparing the mean golabian coefficient for samples of numutian ore, exogeologists find that F equals 1.8 and that P(H0) equals 0.424. How would the scientists best describe this result using conventional terminology?

14. In an ANOVA for comparing the mean patient improvement for samples of patients treated with different types of anticancer agents, a team of oncologists finds that F equals 2.34 and that P(H0) equals 0.0392. How would the scientists best describe this result using conventional terminology?

15. In an ANOVA for comparing the fuel economy figures for 12 brands of dilithium crystals for warp cores, Galaxyfleet analysts find that F 47.1 and that P(H0) equals 1E-13. How would the analysts' conclusion best be expressed using conventional terminology?

16. A marketing analyst is studying the results of two advertising campaigns by comparing the net return on investment in dollars for each of the campaigns. Which analyses are likely to be acceptable for this study?

17. The t-test for equality of means of two samples shows that P(H0) equals 0.98. Are the population means corresponding to the samples likely to be different if we use the 0.05 level of significance?

18. A construction engineer calculates an ANOVA for the mean delivery times shown by four different suppliers to see if they differ significantly. What is the null hypothesis for this analysis?

19. An epidemiologist calculates an ANOVA for the lead concentration in blood samples from a total of 24,358 children coming from 43 neighborhoods. What is the null hypotheses for this analysis?

20. In a study of the average return on the investment for two different investment firms, a student is worried because the parametric variances of the populations from which two samples are drawn are very likely to be unequal according to a test for equality of variances. What is the appropriate test to use for comparing the parametric mean returns on investment in this case?

21. In an ANOVA, what is the statistic that allows us to determine P(H0)?

22. In an ANOVA, how is F determined?

23. In an ANOVA, what is the name of the variable related to the number of observations that influences the probability of obtaining the observed variance ratio or larger?

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