

**Examples of Category Questions:**

CATEGORY: The statistician quit his job to become a baker at the bread factory, so he had to learn the Method of Yeast Squares.

Although credit often goes to another, he first named and published the method of least squares in 1806. Who was this statistician?

ANSWER: Legendre

BONUS: The person widely credited with the method of least squares may have invented it as early as 1795 according to Abbe but did not publish it before Legendre. Who receives the credit?

ANSWER: Gauss

CATEGORY: SLC stands for “Statistical Learning Curve”

You may shorten your statistical learning curve by attending JSM next year, which will be held in another “SLC”, Salt Lake City, UT. For ten points, name the city that is slated to host JSM in the following year, or 2008.

ANSWER: Denver

BONUS: For an additional ten points, name one of the two cities that will host JSM in either 2009 or 2010.

ANSWER: Washington, D.C. or Vancouver, B.C.

CATEGORY: When the Odd Couple were mad at each other, did they get even?

What is equal to the middle order statistic if the sample size  $n$  is odd and the average of the two middle order statistics if  $n$  is even?

ANSWER: Sample median

BONUS: What is defined as the average of the first and last order statistics?

ANSWER: Sample mid-range

**Examples of Toss Up/Bonus Questions:**

TOSS UP: Pencils and paper ready. The probability that a randomly selected customer at a certain gas station checks the oil level is .10. The probability that a randomly selected customer checks tire pressure is .04. The probability that a randomly selected customer checks both oil level and tire pressure is .008. Given that a customer checks the oil level, what is the probability that the customer checks tire pressure?

ANSWER:  $\underline{.08} = .008/10$

BONUS: Are the two events “checking oil” and “checking tires” independent?

ANSWER: No

**Examples of Lightning Round Questions:**

If  $\hat{\theta}$  is the maximum likelihood estimate of  $\theta$ , and if  $u$  of  $\theta$  is a function of  $\theta$ , then  $u$  of  $\hat{\theta}$  is a maximum likelihood estimate of  $u$  of  $\theta$ . What property of maximum likelihood estimation is this an example of?

ANSWER: Invariance property

This word is derived from the Greek word *stochos* meaning guess. It is sometimes used instead of the term “probabilistic”. What is the word beginning with the letter “s”, often paired with the word “process”?

ANSWER: Stochastic

**Examples of Special Questions:**

Shown is a list of titles of famous books, along with a year of initial publication. Can you give the name of the lead author for each of these books?

1. Statistical Methods for Research Workers (1925) (Fisher)
2. Sequential Analysis (1947) (Wald)
3. Experimental Designs (1950) (Cochran)
4. Statistical Methods (1967) (Snedecor)
5. Quality, Productivity, and Competitive Position (1982) (Deming)
6. R.A. Fisher: The Life of a Scientist (1978) (Joan Fisher Box)
7. Applied Regression Analysis (1966) (Draper)
8. Introduction to Mathematical Statistics (1958) (Hogg)

This year ASA offers many Continuing Education courses. Listed are six such courses, with their presenter, with one word missing. Can you fill in the blanks of these ASA CE courses?

1. Gary G. Koch/Todd Schwartz/Rebekkah Dann – “ \_\_\_\_ Data Analysis” – (Categorical)
2. Ingram Olkin – “\_\_\_\_: Statistical Methods for Combining the Results of Independent Studies” – (Meta-analysis)
3. Judith A. Swan – “Effective Scientific \_\_\_\_” – (Writing)
4. Oliver Schabenberger – “Generalized Linear \_\_\_\_ Models: Theory and Applications” - (Mixed)
5. Richard De Veaux – “Practical Data \_\_\_\_” - (Mining)
6. Roger Tourangeau – “The \_\_\_\_ of Survey Response” - (Psychology)