Enhancing the Teaching of Statistics Using SOCR

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www.SOCR.ucla.edu

2007 Joint Statistical Meetings
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Outline

• What is SOCR?
• How to access SOCR
• Components of SOCR
  • Distributions
  • Experiments
• Activities (Wiki)
• Future Research and Development
Accessing SOCR

What is SOCR?

The goals of the SOCR Resource are to design, validate and freely disseminate knowledge. Our Resource specifically provides portable online aids for probability and statistics education, technology based instruction and statistical computing. SOCR tools and resources include a repository of interactive applets, computational and graphing tools, instructional and course materials.

http://www.socr.ucla.edu/
Distributions

FEATURES

• 45+ Distributions
• Graphs
• PDFs
• CDFs
• Inverse CDFs
• Moments
Binomial distribution

- Distributions/Parameters
  - Binomial Distribution
    - No. of Trials: 13
    - Success Probability: 0.4

- Statistics
  - (exact) Binomial(13, 0.4)
  - Mean: 5.200000
  - Median: 5.000000
  - Variance: 3.120000
  - Standard Deviation: 1.766352

- Cut Offs
  - Left Cut Off: 3.0
  - Right Cut Off: 7.0
Normal approximation to binomial
Experiments

FEATURES

• 60+ Experiments
• Simulations
• Summary Stats
• Model vs. Sample
SOCR Distributions Activities

SOCR EduMaterials Distributions Activities

- SOCR Binomial, Geometric, Hypergeometric Distributions Activity
- SOCR Continuous Distributions Activity
- SOCR Exponential Distribution Activity
- SOCR General Central Limit Theorem
- SOCR Negative Binomial Distribution Activity
- SOCR Normal Distribution Activity
- SOCR Poisson Distribution Activity
- Explore relationships among distributions
- Discrete Probability Distributions-examples
- Normal Probability Distribution-examples
- Central Limit Theorem and Chi-Square examples
- More examples on distributions

SOCR Home page: http://www.socr.ucla.edu

Translate this page:

(default) Deutsch Espanol Français Italiano Português 日本語

한국어 中文 繁体中文 Русский Nederlands Ελληνικά
Demonstration

- Poisson distribution
- Poker experiment
Future Research and Development

- SOCR usage
- Classroom testing for the effectiveness of SOCR (2005-06, 2006-07)
- New tools under development
- More SOCR activities for Wiki page
- SOCR Workshop at UCLA, August 6-8, 2007