ASQ CRE Prep course

Lesson II. A. 6.

Sample Size Determination

How many samples do I need?

SAMPLING & SAMPLE SIZE

Random Samples

- **What is wrong with these sampling plans:**
  - **Bill selects the 5 units each day to inspect.**
  - **Jill takes a unit each hour to inspect.**
  - **Sean inspect items at start of reel only**
  - **Jean only selects items from line A**

Time to Failure Censoring and Random

- **Right Censoring**
- **Left Censoring**
- **Interval Censoring**
- **Multiple Censoring**

Sample Size for Hypothesis Test

- **Solve for n**

$$n = \frac{Z^2 \sigma^2}{E^2}$$

Sample Size for p-test

- **For proportions**

$$n = \frac{Z^2 \bar{p}(1-\bar{p})}{(\Delta p)^2}$$

Success Testing

- **Based on Binomial Distribution with no failures over representative lifetime, m.**

$$n = \frac{\ln(1-C)}{m^{\beta}\ln(R)}$$

What is the right number of samples?

Work the Examples, too

Read the book

Send over your questions

fms@accendoreliability.com

ASQ CRE Prep course

Lesson II. A. 7.

Statistical Process Control (SPC) and Process Capability