Sample Size for Population Mean

α = The probability that the true value falls outside the confidence interval.

Z α/2 = The z-score at one-half of α.

σ = Standard deviation.

E = Margin of error.

See: http://www.statisticslectures.com/topics/samplesizepopulationmean/

Sample Size for Population Proportion

α = The probability that the true value falls outside the confidence interval.

Z α/2 = The z-score at one-half of α.

σ = Standard deviation.

d = Margin of error.

p̂ = Educated guess.

Example:

Confidence Level = 95% = 0.95

α = 1- CI = 1 – 0.95 = 0.05

α / 2 = 0.025

Z α/2 = NORM.S.INV(0.975)

N = 1,000,000

p̂ = 0.5 (because we do not have a guess)

d = .05 (±5%)

Sample Size for Population Proportion

α = The probability that the true value falls outside the confidence interval.

Z α/2 = The z-score at one-half of α.

d = Margin of error.

p̂ = Educated guess.

N = Population size.

**Example**

Confidence Level = 95% = 0.95

α = 1- CI = 1 – 0.95 = 0.05

α / 2 = 0.025

Z α/2 = NORM.S.INV(0.975) = 1.96

N = 1,000,000

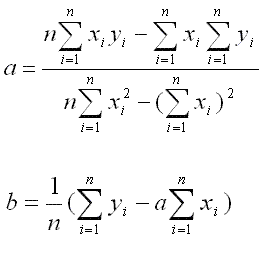
p̂ = 0.5 (because we do not have a guess)

d = .05 (±5%)

Linear Regression

<http://www.analyzemath.com/statistics/linear_regression.html>

y = ax + b



# Base Equation

# Slope

# Y-Intercept

# Alternate forms

# Alternate forms 2

Used in the lazyprogrammer programming exercise.

# Error

E = Error

y^ = prediction

y^ = (ax + b)

yi = collected data points.

xi = collected data points.