StatCrunch Lab 7 for Statistics 301

Topics: probabilities and percentiles for normal distribution

Normal Probability Distribution.

- For 16 year old IQ scores, where $\mu_{16} = 100$ and $\sigma_{16} = 16$, $P(X < 84) = 0.1587$

  Stat, Calculators, Normal, Mean: 100, Std. Dev.: 16,
  Prob(X <= 84) = ?, Compute.

- For 16 year old IQ scores, where $\mu_{16} = 100$ and $\sigma_{16} = 16$,
  $P(84 < X < 100) = 0.3413$

  Data, Compute expression, Expression: pnorm(100,100,16) - pnorm(84,100,16),
  Compute.

Percentiles For Normal Distribution

- 75th percentile for 16 year olds, where $\mu_{16} = 100$ and $\sigma_{20} = 16$, is: 110.8.

  Stat, Calculators, Normal, Mean: 100, Std. Dev.: 16,
  Prob(X <= ?) = 0.75 Compute.