

Stat 201: Statistics I

Chapter 6



Chapter 6

Normal Probability Distributions

Section 6.1

The Standard Normal Distribution

Probabilities of normal variables in StatCrunch

- Stat → Calculators → Normal
- Default mean and standard deviation correspond to standard normal
- To find probabilities of ranges, select “Between”
- To find a probability greater or less than a z-score, choose appropriate comparison symbol and enter z-score inside parentheses (i.e. “ $P(X \leq 1) = \dots$ ”)
- To find a z-score corresponding to a probability, choose appropriate comparison symbol and enter probability *outside* parentheses (i.e. “ $P(X \leq \dots) = 0.385$ ”)
- Click “Compute”

Note

Probabilities from uniform distributions can be found in a similar manner by using the “Uniform” calculator.

Section 6.2

Real Applications of Normal Distribution

Probabilities of normal variables in StatCrunch

- Stat → Calculators → Normal
- Enter mean and standard deviation of distribution
- To find probabilities of ranges, select “Between”
- To find a probability greater or less than a z-score, choose appropriate comparison symbol and enter z-score inside parentheses (i.e. “ $P(X \leq 1) = \dots$ ”)
- To find a z-score corresponding to a probability, choose appropriate comparison symbol and enter probability *outside* parentheses (i.e. “ $P(X \leq \dots) = 0.385$ ”)
- Click “Compute”