



Supplemental Instruction Handouts

Statistics

Chapter 8

Continuous Probability Distribution

1. $P(Z < 2.73)$
2. $P(Z > -1.82)$
3. $P(0.36 < Z < 2.49)$
4. Find $-Z_{0.2000}$
5. Find $Z_{0.0300}$
6. A building contractor claims he can renovate a 200 square foot kitchen and dining room in 32 work hours, plus or minus 8 hours. The work includes plumbing, electrical, cabinets, flooring, new appliance installation and painting. Assume from past experience that times to complete similar projects are normally distributed with mean of 32 hours and standard deviation of 8 hours.
 - A) What is the likelihood the project will be completed in less than 55 hours?
 - B) What is the likelihood that the project will be completed in between 18 and 45 hours?
 - C) What is the likelihood the project will be completed in more than 21 hours?
7. A set of final exam grades in an introduction to statistics course was found to be normally distributed with a mean of 73 and a standard deviation of 8. Only 5% of the students taking the test scored higher than what grade?
8. A statistical analysis of 1,000 long distance telephone calls made from the headquarters of J & S Corporation indicates that the length of these calls is normally distributed with a mean of 240 seconds and a standard deviation of 40 seconds. What is the length of a particular call if only 1% of all calls are shorter?