

Worksheet 5

1. The weekly salaries of teachers in one state are normally distributed with a mean of \$490 and a standard deviation of \$45. What is the probability that a randomly selected teacher earns more than \$525 per week?
2. IQ scores are normally distributed with a mean of 100 and a standard deviation of 15. In a random sample of 4000, approximately how many people will have IQs between 85 and 120?
3. Human body temperatures are normally distributed with a mean of 98.20° F and a standard deviation of $.62^{\circ}$ F.
 - a. Find the temperature that separates the top 7% from the bottom 93%.
 - b. If a person is randomly selected, find the probability that their body temperature will be less than 98.50° F.
4. A multiple choice test consists of 60 questions. Each question has 4 possible answers. If all answers are random guesses, use the normal distribution as an approximation to the binomial distribution to estimate the probability of getting at least 20% correct.