

**STATISTICS 1040**  
**Quiz 8, Fall 2014**

**Name** \_\_\_\_\_  
**Recitation Instructor** \_\_\_\_\_ **Time** \_\_\_\_\_

1. About 8 percent of men in the U.S. have some form of color-blindness. Assuming that color-blindness is assigned randomly to men at birth, estimate the chance that of 400 male births in the U.S., fewer than 6 percent will be color-blind. (4 points)

2. A simple random sample of 400 people (over the age of 18) is taken from Utah. Of those sampled, 256 favor fluoridation of the drinking water. Find a 95 % confidence interval for the percentage of people in the state who favor fluoridation of the drinking water. (3 points)

3. The U.S. Bureau of Labor Statistics regularly collects information on the labor market. From a random sample of 1600 manufacturing workers, the bureau found that workers employed in manufacturing industries earned an average of \$670 per week and the standard deviation for this sample is \$80. Find a 95% confidence interval for the average weekly earnings of all U.S. workers employed in manufacturing industries (3 points)