

MA2224 Quiz 5(A)

Section: _____ Name: _____ ID: _____

- (1) Assume that the yield per acre for a particular variety of corn is $N(\mu, \sigma^2)$. For a random sample of 15 fields, the yield in bushels per acre has a mean of 82 and a standard deviation of 3. Find a 95% confidence interval for σ .
- (2) Suppose that 60 light bulbs made by a certain manufacturer lasted on average 630 hours with a standard deviation of 50 hours. Do you have enough evidence to reject the manufacturer's claim that the average life is at least 650 hours? In other words, test the null hypothesis $H_0 : \mu \geq 650$ against $H_1 : \mu < 650$. Use the significance level $\alpha = 0.04$. .