Quiz # 10 **Stat 3445, Due Apr 19**

Name:

1. The Rockwell hardness index for steel is determined by pressing a diamond point into the steel and measuring the depth of penetration. For 50 specimens of an alloy of steel, the Rock well hardness index averaged 62 with standard deviation 8. The manufacturer claims that this alloy has an average hardness index of at least 64.

   (a) Is there sufficient evidence to refute the manufacturer's claim at the 1% significance level?

   (b) Calculate the value of β for the alternative $\mu_a = 60$.