Stat873 **HW07**

1. Consider two-sided t-tests

   (1) Complete the α-level test scheme.

   $H_0 : l'\beta = b$ vs $H_a : l'\beta \neq b$
   Test Statistic: $t = \frac{l'\widehat{\beta}-b}{S_{l'\widehat{\beta}}}$
   Reject H_0 if _____

   (2) Complete the test scheme using p-value.

   $H_0 : l'\beta = b$ vs $H_a : l'\beta \neq b$
   Test Statistic: $t = \frac{l'\widehat{\beta}-b}{S_{l'\widehat{\beta}}}$
   p-value: _____

   (3) Show that α-level rejects H_0 if and only if p-value$< \alpha$.

2. Consider upper-sided alternative t-test.

   (1) Complete the α-level test scheme.

   $H_0 : l'\beta \leq b$ vs $H_a : l'\beta > b$
   Test Statistic: $t = \frac{l'\widehat{\beta}-b}{S_{l'\widehat{\beta}}}$
   Reject H_0 if _____

   (2) Show that the level of the test in (1) is α.

3. One-way ANOVA data with 4 levels: a, b, c, d are stored in mydata.dat. Find 90% CI for μ_d.
   Write formula, plug in numbers, present the final result. Use SAS.