Problem set 1.
Due: 15 Sep 2005.

   (a) Are the lives of these brands different?
   (b) Compare the pairs of treatment means using the Tukey’s method.
       Show the steps as clearly as possible.
   (c) Assuming that Brand 2 is the control treatment, compare other two
       brands with Brand 2 using Dunnett’s method.
   (d) Same as question (d) in the problem.

2. Consider the data in Problem 3 – 10 page 114 in the textbook.
   • Solve problems (a) and (b).

3. Construct a Completely Randomised Design with 4 treatments and with
   replications 5, 4, 5 and 6 respectively. Clearly show the random variables
   you used. (Each student should get a different design).

4. (Question for extra credit) Suppose one experimenter has \( n \) experimental
   units. He decides to generate a CRD with \( v \) treatments as follows.
   Divide the unit interval in \( v \) disjoint subintervals of equal length. Then
   pick \( n \) random numbers from \( U(0,1) \) distribution. Associate each experi-
   mental units with exactly one of these numbers. Now if the \( i \)th number
   is in the \( j \)th interval apply treatment \( j \) to experimental unit \( i \).

   (a) Is it a correct CRD?
   (b) Generate two designs in the above way and substantiate your argu-
       ment?