* one-way analysis of variance with many treatments;
* crossvalidation of models suggested by multiple comparisons;

options pagesize=53 linesize=76 pageno=1;

data seeddat;
infile "a:\ uniq.dat"; * use on PC;
* infile "uniq.dat"; * use on mainframe;
input testeff size; * ignore rest of data;
order=size;
label testeff="Test Effectiveness"
   size="Test Set Size"
   order="Order for Test Set Size"
;
proc sort;
by order;
title "Fault Seeding Experiment - Uniq Utility";

data regdat;
set seeddat;
* grouping 1 at a time;
x2=(order=2);
x3=(order=3);
x4=(order=4);
x5=(order=5);
x6=(order=6);
x7=(order=7);
x8=(order=8);
x9=(order=9);
x10=(order=10);
* grouping 2 at a time;
x3_4=x3+x4;
x4_5=x4+x5;
x5_6=x5+x6;
x6_7=x6+x7;
x9_10=x9+x10;
* grouping 3 at a time;
x6_8=x6+x7+x8;
x8_10=x8+x9+x10;
* grouping 4 at a time;
x6_9=x6+x7+x8+x9;
x7_10=x7+x8+x9+x10;
proc reg;
* suggested by waller t duncan snk regwq;
  model testeff=x2 x3 x4 x5 x6 x7 x_{10} / r noint;
* suggested by tukey, gt2, sidak, and bon;
  model testeff=x2 x3 _4 x5 _6 x7 _10 / r noint;
  model testeff=x2 x3 _4 x5 x6 _7 x8 _10 / r noint;
  model testeff=x2 x3 _4 x5 x6 _8 x9 _10 / r noint;
* suggested by scheffe;
  model testeff=x2 x3 _4 x5 _6 x7 _10 / r noint;
  model testeff=x2 x3 x4 _5 x6 x7 _10 / r noint;
  model testeff=x2 x3 _4 x5 x6 _7 x8 _10 / r noint;
  model testeff=x2 x3 _4 x5 x6 _8 x9 _10 / r noint;
  model testeff=x2 x3 x4 _5 x6 _8 x9 _10 / r noint;
  model testeff=x2 x3 _4 x5 x6 _9 x10 / r noint;
  model testeff=x2 x3 x4 _5 x6 _9 x10 / r noint;
id order;
run;