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Section 001B

Title: 17.27 and 17.28 problem for HW#8

```
*/
/*Loading data*/
data strength_data;
  input machine operator @ ;
  do k = 1 to 2;
    input strength @;
    output;
  end;
cards;
1 1 204 205
1 2 205 207
1 3 211 209
2 1 205 210
2 2 205 206
2 3 207 210
3 1 203 204
3 2 206 204
3 3 209 214
4 1 205 203
4 2 209 207
4 3 215 212
;
run;
quit;
/*Using Type III method*/
proc mixed data = strength_data method = type3 ;
  class machine operator; /* machine and operator are the two factors*/
  model strength =; /* strength is the response*/
  random machine operator machine*operator; /* machine*operator, machine and operator are the random
run;
/* Ans.to 17.28 (a) */
/*Using REML method*/
proc mixed data = strength_data method = reml ;
  class machine operator; /* machine and operator are the two factors*/
  model strength = / ddfm = satterth cl ; /* strength is the response, used Satterwieth's adjustment
  random machine operator machine*operator; /* machine*operator, machine and operator are the random
  estimate 'Avg. solder strength' intercept 1 / cl; * get CI of the estimate of the avg. solder stren
run;
```