Statistics 23, Section 1, Homework # 7

Due: Thursday, October 21, 1999

2.51   c,   compute $s^2$ using a calculator, and <u>both</u> formulas  (definition and shortcut)   (4.3)

2.48   b   (3.33)

4.22   b   compute by <u>both</u>  $E(X-EX)^2$  and  $E(X)^2-(EX)^2$.   (10.6)

2.55   using Excel.

B13

(a)   a list of 20 numbers has  $\bar{x}=-2$  and  $s=2$, find  $\sum_{i=1}^{n} x_i$  and  $\sum_{i=1}^{n} x_i^2$   (-40, 156).

(b)   a list of 20 numbers is claimed to have  $\sum_{i=1}^{n} x_i^2 = 100$  and  $\sum_{i=1}^{n} x_i = 200$. Show this claim is false, by showing this gives an impossible  $s^2$.

4.39   a-c, calculate $\sigma^2$ and $\sigma$.

5.16   a – c   (0, 0.841, 0.841)

5.18   (1.65, 1.96, -1.96, 1.28, 1.28)

5.23   a, b, e

5.24   a, e   (53.0, 46.2)

5.29   a

5.31

5.36   (0.0307,  0.0893)