

Statistics 523, Problem Set 3

Wellner; 4/14/99

Reading: Shorack, PfS; Chapter 17, pages 379 - 393;
Chapter 15, pages 335 - 348.

Due: Wednesday, April 21, 1999.

1. PfS, Exercise 17.1.3, page 383.
2. PfS, Exercise 17.1.4, page 383.
3. PfS, Exercise 17.2.4, page 392, reworded as follows:
 - (a) Verify (21). Show that the value of the variance simplifies to 1 in case X_i and Y_i are independent.
 - (b) Verify (24).

Comment: it seems to me that the moment hypotheses $E|X|^3 < \infty$ and $E|Y|^3 < \infty$ may not suffice for the conclusion (24). Why? You may need to impose additional moment conditions in order to conclude (24), but you should aim to prove (24) with some appropriate minimal moment assumptions.
4. PfS, Exercise 17.2.7, page 392.