

# 2 (#18, pg. 426) cont.: 1

b) Since  $\text{Cov}(X, Y) = 0$ ,  $X$  and  $Y$  are not independent.

This does not contradict exercise 23 of section 8.2 because  $f_{X, Y}(x, y)$  is positive on non-rectangular region.

# 3 (#15, pg. 426)

a) If we measure  $V_1$  with device directly, we have error with variance  $\sigma^2$ .  
Ditto for measuring  $V_2$  w/ device directly.

b) Suppose we again use just two measurements, but this time we measure

$$V = V_1 + V_2$$

and

$$W = V_1 - V_2$$