1. **Chapter 11, Section 11.1, Exercise 10**

(a) **Tests**

- (Factor A = Batch) (1) $H_0: \sigma_A^2 = 0$ vs. $H_a: \sigma_A^2 \neq 0$
  (2) F=7.22 ⊗
  (3) P-value <.0005 ⊗
  (4) Reject H_0. ⊗

- (Factor B = Method) (1) $H_0: \beta_1=\beta_2=\beta_3=0$ vs. H_a: H_0 is false.
  (2) F=8.69
  (3) P-value =.002
  (4) Reject H_0.

(b) Estimate of σ_A^2 = (9.644 – 1.336)/3 = 2.7693 ⊗

(c) 100*[2.7693/(2.7693+1.336)] = 67% ⊗

B method is NOT random