

Variance

$$\frac{(n-1)s^2}{\chi^2_R} < \sigma^2 < \frac{(n-1)s^2}{\chi^2_L}$$

n = sample size

s = sample variance

$$df = n - 1$$

p 378

18.

a) Range rule of thumb

$$s = \frac{1.015 - .696}{4}$$

$$s = .07975$$

$$b. \sqrt{\frac{(n-1)s^2}{\chi^2_R}} < \sigma < \sqrt{\frac{(n-1)s^2}{\chi^2_L}}$$

$$\sqrt{\frac{(100-1)(.07975)^2}{129.561}} < \sigma < \sqrt{\frac{(100-1)(.07975)^2}{74.222}}$$

95% C.I.
 $\alpha = .05$
 $\frac{\alpha}{2} = .025$
 .025
 .975

$$.0453 < \sigma < .0598$$

