

**Homework Solutions**  
**Chapter 9 – Page 595**

**Exercise 19**

(a) The point estimate is  $\hat{p} = \frac{17}{40} = 0.425$ .

(b) The 99% confidence interval for  $p$  is

$$\begin{aligned}\hat{p} \pm z\sqrt{\frac{\hat{p}(1-\hat{p})}{n}} &= 0.425 \pm 2.576\sqrt{\frac{(0.425)(0.575)}{40}} \\ &= 0.425 \pm 0.2013.\end{aligned}$$

(c) The margin of error is 0.2013.