

## Homework Solutions

### Chapter 8 – Page 526

#### Exercise 14

(a) The sampling distribution of  $\hat{p}$  is normal with mean 0.50 and standard deviation

$$\sqrt{\frac{(0.50)(0.50)}{300}} = 0.0289.$$

(b) The sample proportion is  $\hat{p} = \frac{168}{300} = 0.56$ . The  $p$ -value is

$$\text{normalcdf}(.56, E99, .50, .0289) = 0.0189.$$

(c) The  $p$ -value is less than 0.05, so we should reject  $H_0$  and conclude that more than 50% of holiday shoppers in the mall favor longer shopping hours.