

## Homework Solutions

### Chapter 9 – Page 580

#### Exercise 1

- (a) (i)  $H_0 : p = 0.50$   
 $H_1 : p > 0.50$
- (ii)  $H_0 : p = 0.50$   
 $H_1 : p \neq 0.50$
- (b) (i) A Type I error would be to conclude that the proportion of Democrats is more than 0.50 when it is really 0.50. A Type II error would be to conclude that the proportion of Democrats is 0.50 when it is really more than 0.50.
- (ii) A Type I error would be to conclude that the proportion of male births is not  $\frac{1}{2}$  when it is really  $\frac{1}{2}$ . A Type II error would be to conclude that the proportion of male births is  $\frac{1}{2}$  when it is really not  $\frac{1}{2}$ .