3.1.1

A survey question for a sample of 150 individuals yielded 75 **Yes** responses, 55 **No** responses, and 20 **No Opinions**.

a) What is the point estimate of the proportion in the population who respond **Yes**?

$$\bar{p} = \frac{x}{n} = \frac{75}{150} = 0.5$$

b) What is the point estimate of the proportion in the population who respond **No**?

$$\bar{p} = \frac{x}{n} = \frac{55}{150} = \frac{11}{30} = 0.36666666$$

3.1.2

Many drugs used to treat cancer are expensive. BusinessWeek reported on the cost per treatment of Herceptin, a drug used to treat breast cancer(BusinessWeek, January 30, 2006).

Typical treatment costs (in dollars) for Herceptin are provided by a simple random sample of 10 patients.

$4,376 $5,578 $2,717 $4,920 $4,495 $4,798 $6,446 $4,119 $4,237 $3,814

a) Develop a point estimate of the mean cost per treatment with Herceptin

b) Develop a point estimate of the standard deviation of the cost per treatment with Herceptin.

3.1.3

The American Association of Individual Investors (AAII) polls its subscribers on a weekly basis to determine the number who are bullish, bearish, or neutral on the short-term prospects for the stock market. Their findings for the week ending March 2, 2006, are consistent with the following sample results (AAII website, March 7, 2006). Develop

Bullish 409 Neutral 299 Bearish 291

a point estimate of the following population parameters.

a) The proportion of all AAII subscribers who are bullish on the stock market.

b) The proportion of all AAII subscribers who are neutral on the stock market.

c) The proportion of all AAII subscribers who are bearish on the stock market.

3.1.4

A simple random sample of 5 months of sales data provided the following information:

Month:	1	2	3	4	5
Units Sold:	94	100	85	94	92

a) Develop a point estimate of the population mean number of units sold per month.

b) Develop a point estimate of the population standard deviation.