CENTER AND SPREAD

TEXT: 2.5, 2.6, 2.7

LAST NAME	FIRST NAME	DATE

1 (3 points)**.** Compute the following statistics for the sample. Check your answers using the technology.

$$8 \quad 14 \quad 12 \quad -12 \quad 8 \quad -2 \quad 4 \quad -16$$

(a) mean (show algebraic work)

(b) median

(c) mode

2 (4 points)**.** Compute the following statistics for the sample. Check your answers using the technology.

$$-5 \quad -13 \quad 5 \quad -11 \quad -6$$

(a) mean

(b) variance (show algebraic work, like a formula or a table)

(c) standard deviation

3 (1 point)**.** A sample of five San Francisco residents provides the following data for the amount of time in hours spent on commute weekly:

$$5 \quad 7 \quad 11 \quad 4 \quad x$$

Find the missing data value x if the sample mean $\overline{x} = 7.2$

4 (4 points)**.** Given a sample with mean $\overline{x} = -10$ and standard deviation $s = 4$, and assuming that the distribution is approximately normal (symmetric & bell-shaped), find the percentage of the population we expect to have these measurements:

(a) between -14 and -10?

(b) below -18?

(c) above -22?

(d) between -18 and -2?

5 (2 points)**.** Given a sample with mean $\overline{x} = -10$ and standard deviation $s = 4$, and **without assuming anything about the shape of the distribution**, describe the percentage of the population we expect to have these measurements:

(a) within 3.5 standard deviations away from the mean?

(b) between -18 and -2?