

→ Section 2.3 ←
 PART I

Summarizing Data Using Averages

Adult Female
Heights (cm) ←

Sample

$\bar{x}$ ←

148.6

152.2

152.7

155.1

155.2

155.5

156.2

156.8

156.9

157.9

158.0

158.3

158.4

158.6

159.8

159.8

159.9

160.2

160.9

162.3

162.4

164.0

164.2

166.9

167.2

167.6

170.4

175.9

176.4

184.1

4841.8 ← Total

Reminder: Parameter vs. Statistic.

↓
Summary
value of
a population.

↓
summary
value of a
sample.

Notation: x represents data
values. n = Sample
size. Σ → summation
operator.
→ Σx is
the sum of all x .

The Arithmetic Mean
(or "the mean").

→ The arithmetic mean of
a population is μ
(Greek "mu"). μ = population mean.
→ The arithmetic mean of
a sample is $\bar{x}$ ("x bar").

$$\bar{x} = \frac{\Sigma x}{n}$$

For the adult female
heights, $\Sigma x = 4841.8$,
and $n = 30$.

$$\bar{x} = \frac{\Sigma x}{n} = \frac{4841.8}{30}$$

$$\approx 161.393$$

$$\approx 161.39 \text{ cm}$$

Rounding
Rule

(Carry one place more,
after the decimal,
than the sample data.)