Abb. 16.2 Find the variance for the following set of data representing trees in California

3, 21, 98, 203, 17, 9

Sol:

$$\text{Var} = \sqrt{SD}$$

$$SD = \frac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{n-1}$$

$$\bar{x} = \frac{3+21+98+203+17+9}{6} = \frac{351}{6} = 58.5$$

$$S.D = \frac{(3-58.5)^2 + (21-58.5)^2 + (98-58.5)^2 + (203-58.5)^2 + (17-58.5)^2 + (9-58.5)^2}{5}$$

$$= \frac{31099.5}{5} = 6219.9$$

$$\text{variance} = \sqrt{SD} = \sqrt{6219.9}$$

$$= 78.86$$