**Assignment 16.2**

# Problem Statement 1:

Find the variance for the following set of data representing trees in California (heights in

feet):

**3, 21, 98, 203, 17, 9**

Answer :

Step1: Find Xi-Mean

Step2: Find (Xi-Mean)2

Step3: Find Sum((Xi-Mean)2

Step4 : Find Sum((Xi-Mean)2)/(n-1) , which is Variance

As per the sample, below is the following :

Mean : 58.5

Variance : 6219.9

|  |  |  |  |
| --- | --- | --- | --- |
| Xi (Height) | Xi - Mean | (Xi-Mean)2 |  |
| 3 | -55.5 | 3080.25 |  |
| 21 | -37.5 | 1406.25 |  |
| 98 | 39.5 | 1560.25 |  |
| 203 | 144.5 | 20880.25 |  |
| 17 | -41.5 | 1722.25 |  |
| 9 | -49.5 | 2450.25 |  |
|  |  | 31099.5 | 6219.9 |
|  |  |  |  |
| Mean | 58.5 |  |  |
| Sum((Xi-Mean)2) | 31099.5 |  |  |
| Sum((Xi-Mean)2)/(n-1) - Variance | 6219.9 |  |  |