**Statistics Assignment 7.2**

**Problem Statement 1**

*You survey households in your area to find the average rent they are paying. Find the standard deviation from the following data: $1550, $1700, $900, $850, $1000, $950.*

**Solution Statement 1:**

Let represent each observation in the sample

Mean is given by

=

Variance is given by

Hence the standard deviation is given by:

=

**Problem Statement 2:**

*Find the variance for the following set of data representing trees in California (heights in feet):*

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

**Solution Statement 2:**

Mean is given by:

=58.5 feet

Variance is given by:

**Problem Statement 3:**

*In a class of 100 students, 80 students passed in all subjects, 10 failed in one subject, 7 failed in two subjects and 3 failed in three subjects. Find the probability distribution of the variable for number of subjects a student from the given class has failed in.*

**Solution Statement 3:**

Let be the random variable that represents the number of subjects failed by a student from a given class

The probability distribution is given by

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 |
|  |  |  |  |  |