**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:**

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Step1: Find the average of the data set

Mean= (1550+1700+900+850+1000+950)/6 = 1158.3333

Step2: Take each value in the data set (x) and subtract the mean from it to get. Square each of the differences

(1550-1158.33)= 391.67 Square(391.67)=153405.38

(1700-1158.33)= 541.67 Square(541.67)=293406.38

(900-1158.33)= -258.33 Square(-258.33)=66734.38

(850-1158.33)= -308.33 Square(-308.33)=95067.38

(1000-1158.33)=-158.33 Square(-158.33)=25068.38

(950-1158.33)=-208.33 Square(-208.33)=43401.38

Step3: Add up all of the results from Step 3 to get the sum of squares

(153405.38+293406.38+66734.38+95067.38+25068.38+43401.38)=677083.28

Step4: Divide the sum of squares (found in Step 4) by the number of numbers in the data set minus one; that is, (n – 1).

677083.28/5= 135416.65

Step5: Take the square root to get Standard Deviation = 367.99