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.

**Step 1:** Add up the numbers in your given data set.

1550 + 1700 + 900 + 850 + 1000 + 950 = 6950

**Step 2:** Square your answer:

48302500

…and divide by the number of items. We have 6 items in our example so:

48302500/ 6 = 8050416.66

Set this number aside for a moment.

**Step 3:** Take your set of original numbers from Step 1, and square them individually this time:

(1550\*1550) + (1700\*1700) + (900\*900) + (850\*850) + (1000\*1000) + (950\*950)

Add those numbers (the squares) together:

8727500

**Step 4:** Subtract the amount in Step 2 from the amount in Step 3.

8727500 - 8050416.66= 677083.34

Set this number aside for a moment.

**Step 5:** Subtract 1 from the number of items in your data set\*. For our example:

6 – 1 = 5

**Step 6:** Divide the number in Step 4 by the number in Step 5. This gives you the **variance**:

677083.34/5 = 135416.668

How to find the sample variance: Standard Deviation Example 1

**Step 7:** Take the square root of your answer from Step 6. This gives you the **standard deviation**:

√135416.668= 367.99