**Data taken from 50 Ramen Shops in Kyoto, Japan**

**Prices of Ramen Bowl**

Let’s take an arbitrary value from Mid-Point column

As we already know that class interval is

So, we can change the origin and scale of data as follows

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lower Class Limit** | **Upper Class Limit** | **Frequency** | **Mid-Point** |  |
| 500 | 600 | 4 | 550 | -2 |
| 600 | 700 | 13 | 650 | -1 |
| 700 | 800 | 18 | 750 | 0 |
| 800 | 900 | 12 | 850 | 1 |
| 900 | 1000 | 3 | 950 | 2 |
|  |  | **50** |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| -2 | 4 | -8 | 16 |
| -1 | 1 | -1 | 1 |
| 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 4 | 8 | 16 |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| -8 | 16 | -32 | 64 |
| -13 | 13 | -13 | 13 |
| 0 | 0 | 0 | 0 |
| 12 | 12 | 12 | 12 |
| 6 | 12 | 24 | 48 |
| **-3** | **53** | **-9** | **137** |

**Moments about Zero (After Changing Scale of a group data with equal class interval )**

**Moments about Mean**

**Calculations:**