

The Red Bead Experiment

Employee	Day 1	Day 2	Day 3	Day 4	TOTALS
Daily Total					-----
Daily Average					-----
Grand Total	-----	-----	-----	-----	
Grand Mean	-----	-----	-----	-----	

1. The central line on the chart is placed at the average count (*GrandMean*).
2. Calculate Sigma.

$$\sigma = \sqrt{GrandMean \times \left[1 - \frac{GrandMean}{50} \right]}$$

Note, 50 is the number of depressions on the paddle (an employee's daily production)

3. Calculate the Upper and Lower Control Limits:

$$GrandMean \pm 3\sigma$$

4. Plot the 24 results.