koné consulting

XmR chart for new application backlog

Step 1: Record your data

Date	Data
April 13	21
April 20	10
April 27	8
May 4	8
May 12	9
May 18	3
May 25	12
June 1	11
June 8	12
June 15	16

Step 2: Compute moving ranges

Moving range
n/a
11
2
-
1
6
9
1
1
4

Step 3: Draw a run chart of the data from step 1.

Step 4: Compute the average of your data: 11 $\bar{X}$ or X-bar

Step 5: Draw the center line on your chart (using the value from Step 4).

Step 6: Compute the average moving range: 3.89 $\overline{mR}$ or MR-bar

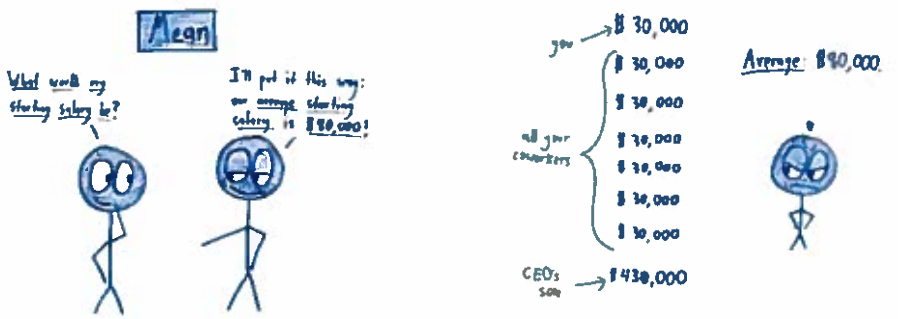
Step 7: Compute the upper and lower natural process limits (NPL).

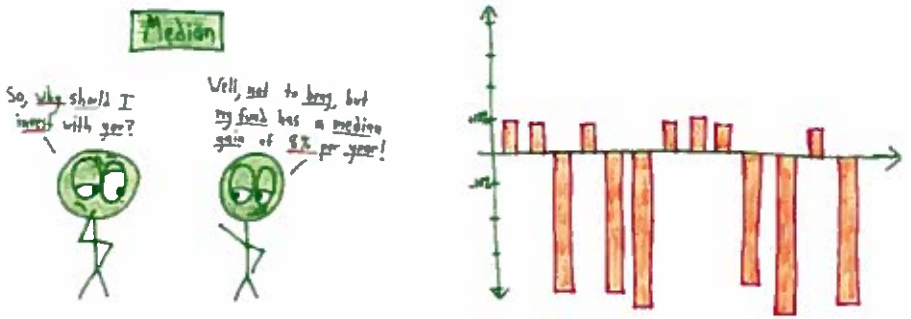
$\bar{X} + (2.66 \times \overline{mR}) =$ 21.34 Upper NPL

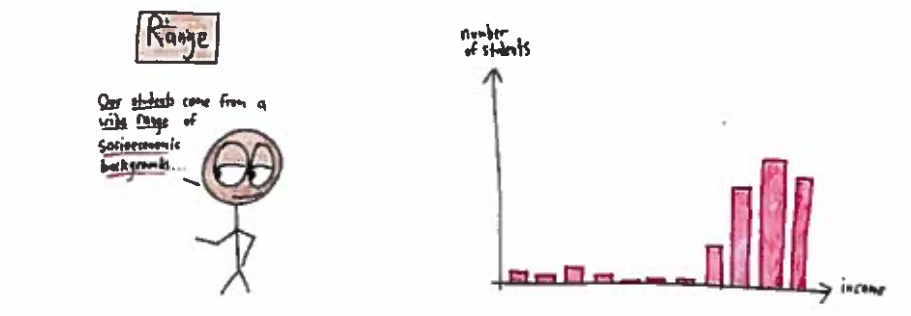
$\bar{X} - (2.66 \times \overline{mR}) =$ 0.66 Lower NPL

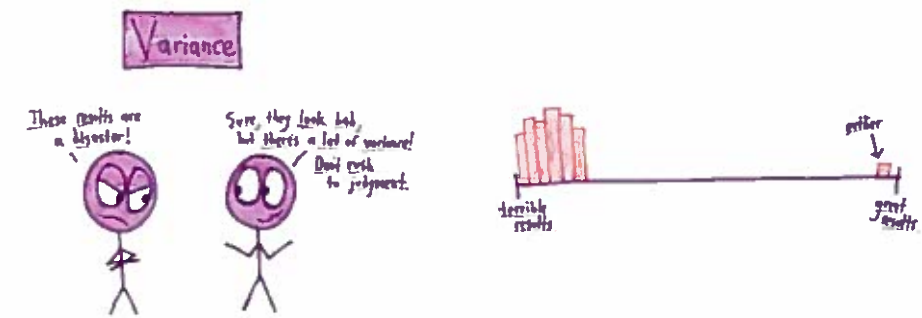
Step 8: Draw the upper and lower natural process limits on your chart.

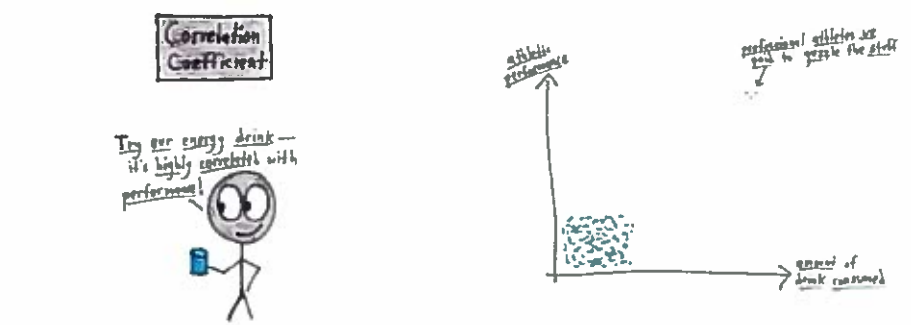
Statistical Measures – mathwithbaddrawings.com by Ben Orlin











Why not to trust statistics – source and credit for these images https://mathwithbaddrawings.com/2016/07/13/why-not-to-trust-statistics/

These drawings come from Ben Orlin's fabulous Math With Bad Drawings blog. This set of drawings shows a different statistical measure and how it can be misused in some way. The intention is to be aware when you are given a statistical measure how to interpret how it may not be giving you the larger picture. Take care! Follow Ben on Twitter @benorlin