

## **Z SCORES**

Data with different values are better compared by converting to a common measure. The common measure used is the distance from the mean in terms of standard deviation. This is done by way of "Z" scores. Each value is converted to standard deviations with the following formula:

$$Z = (X-AVG)/STD$$

Where:

**X** = the data to be converted

**AVG** = mean for the data group

**STD** = standard deviation for the data group

The Z scores for the Summerton data are:

### **TABLE**

<b>DATA</b>	<b>Z SCORES</b>
250	-1.071
300	-0.913
350	-0.755
350	-0.755
400	-0.597
400	-0.597
400	-0.597
450	-0.440
450	-0.440
450	-0.440
500	-0.282
500	-0.282
600	0.033
650	0.191
700	0.349
750	0.507
1000	1.295
1200	1.926
1500	2.873

Z scores can be used to directly compare two sets of data even though there may be differences in magnitude between the two. They will be used to transform raw data in subsequent statistical

**measures as the transformed data allows the easy calculation of a number of otherwise complex; statistics.**

**DIAGRAM WHEN THE DATA IS SKEWED, THE 3 MEASURES CANNOT COINCIDE**

