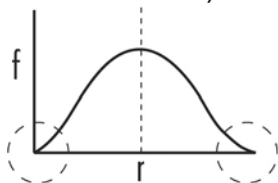


## Useful Statistical Terms

- $\chi$  - Any one test result
- $\bar{\chi} = \frac{\sum \chi}{n}$  - Mean or average
- $d = 1\bar{\chi} - \chi_1$  - Deviation from the mean
- $s = \sqrt{\frac{\sum d^2}{n-1}}$  - Standard deviation
- $c \text{ of } v(\%) = \frac{s}{\bar{\chi}} \times \frac{100}{1}$  - % coefficient of variation

$r =$  (difference between highest & lowest result) - Range

$f =$  (no of times any test result occurs) - Frequency



- Normal distribution

### NB:

To gain information about the population from samples taken from the population

**A:** Samples taken must accurately represent the population otherwise information and decisions taken may be incorrect.

**B:** Results should be statistically analysed and quoted only to the level of accuracy to which they have been measured.

### TO CALCULATE C.V.% ON A CALCULATOR

- Enter the calculator into the STATS mode.
- Enter each number required for the calculation into the calculator using the  $\Sigma$  or DATA function to enter each number.
- After entering all the numeric values obtain the MEAN  $\Sigma$  and record.
- Obtain the Standard Deviation by pressing the S.D. (6<sup>th</sup>) function and record.
- Divide the Standard Deviation by the mean.
- Multiply by 100 to obtain the coefficient of Variation % - C.V.%.