

Some possible interpretation of commonly used Graphs, Quality tools & techniques

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http://www.pu.edu.pk/faculty/lectures/66004_lectures.asp

- Histograms
- Stem & Leaf Plot
- Box Plot
- Anderson Darling Test

All to see data distribution

Pattern of variation in data

Other interpretations depending upon shape

Stem-and-Leaf Display: WEIGHT (g)

Stem-and-leaf of WEIGHT (g) N = 36
Leaf Unit = 0.10

```

2      120    00
5      121    000
15     122    000000000000
(8)    123    0000000000
13     124    0000000
8      125    000000
3      126    000

```

Stem-and-Leaf Display: AGE

Stem-and-leaf of AGE N = 60
Leaf Unit = 1.0

```

2      3      23
5      3      678
11     4      013344
25     4      5555666777888889
(12)   5      0000000112333
23     5      5556666778889
11     6      0111223
4      6      99
2      7      04

```

Stem-and-Leaf Display: stem

Stem-and-leaf of stem N = 34
Leaf Unit = 0.10

```

1      121    0
3      122    00
8      123    000000
17     124    0000000000
17     125    0000000000
8      126    000000
3      127    00
1      128    0

```

Stem-and-Leaf Display: stem

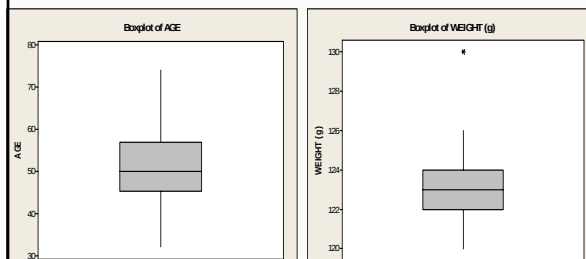
Stem-and-leaf of stem N = 35
Leaf Unit = 0.10

```

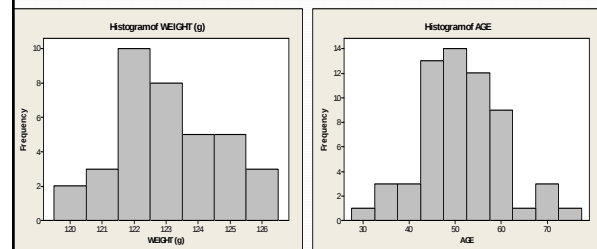
1      121    0
3      122    00
8      123    000000
17     124    0000000000
(10)   125    00000000000
8      126    000000
3      127    00
1      128    0

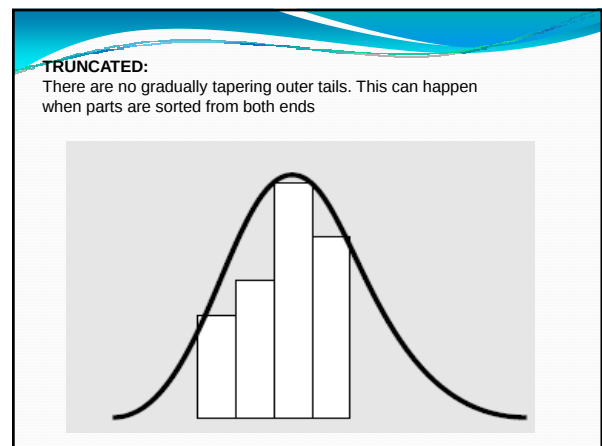
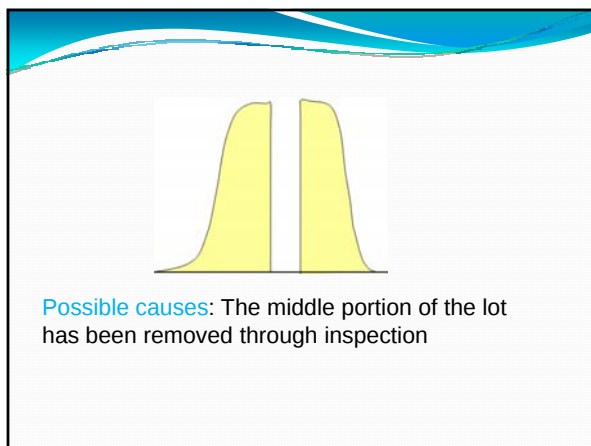
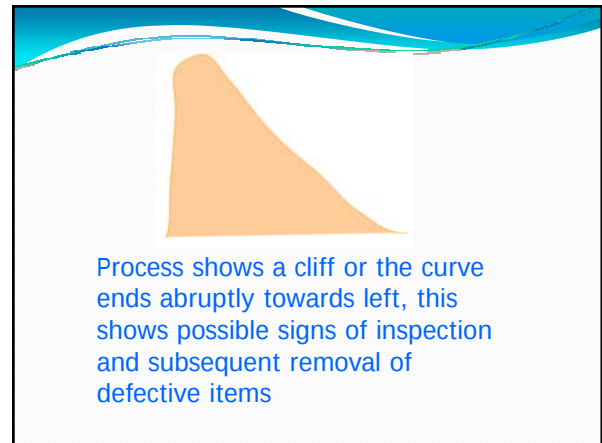
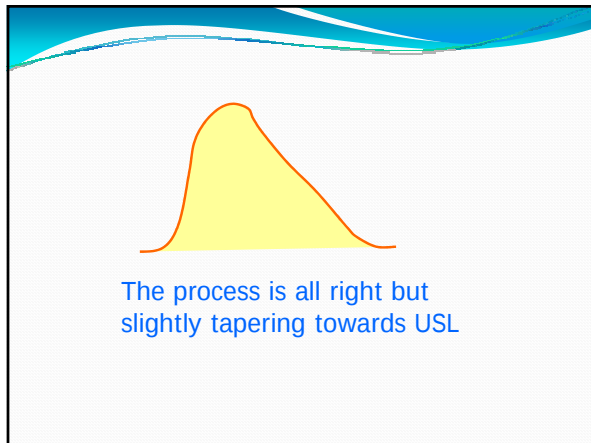
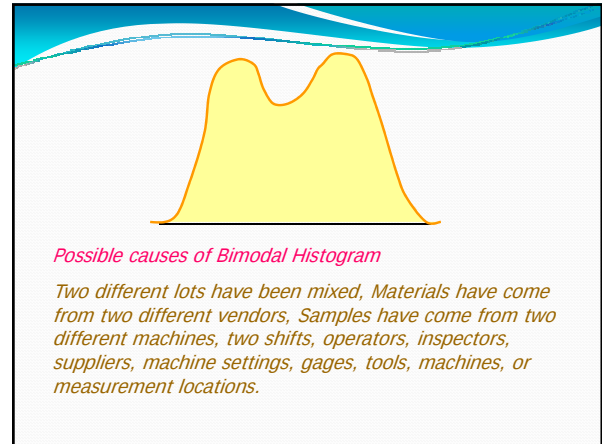
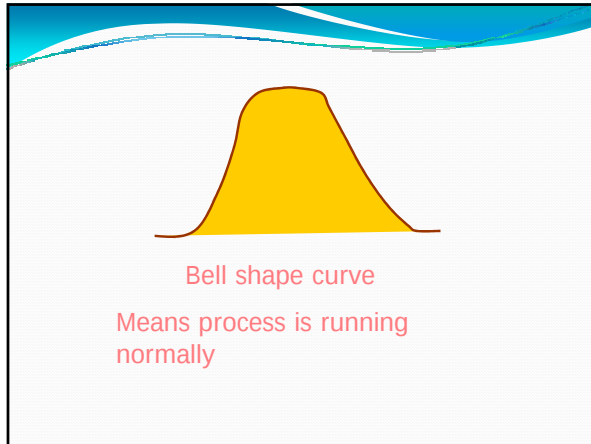
```

BOX PLOT



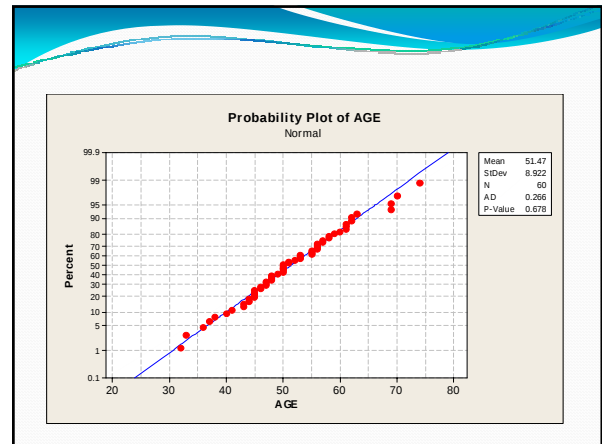
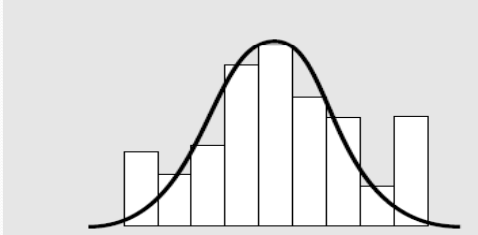
HISTOGRAMS





SPIKES AT TAILS:

The parts in the outer ends of the distribution are being reworked to bring the characteristic just within specifications, or measurements of out-of specification parts are being recorded as in specification.



In Anderson Darling Test a large p-value (e.g. > 0.3) is a strong indication that the data follows a normal distribution;

on the other hand, a small probability like 0.05 indicates a 5% chance that the data is Normal.