The Best Control Chart Decision Tree You'll NEVER Need

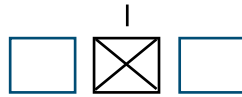| Type of Data	How it is Counted	Sample Size	Chart	Data Example

Attribute Charts

Counted Data

Count defective items or defects.

Defects don't meet the acceptable criteria.

Defects can be: mistakes, errors, scratches, dents, people, injuries, events, etc.

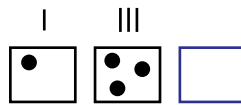Always an integer: a whole number. (e.g. 9, 35, 2)

Count Defective Items

Is it Defective? YES / NO

Constant
- defects/100

np Chart

Sample	Defects	Sample Size = 50
S1	12	
S2	15	
S3	8	

Varies
- wrong orders/orders
- medication errors
- infections/patient days

p Chart

Sample	Defects	Sample Size
S1	12	90
S2	15	100
S3	8	90

Count Defects

Can have more than one defect per item.

Constant
- injuries/month
- Patient falls/month

c Chart

Pinholes
8
9
5

Varies
- errors/orders
- scratches/door
- Patient falls/days

u Chart

Roll Number	Defects in Cloth	Square Meters
R1	14	10
R2	12	8
R3	20	13

Calculate a rate or ratio

How many sub-groups?

Individuals

1
- length or weight per item
- time/project
- cost/project
- infections/1000 patient days

XmR Individuals

Batch Number	Viscosity
B1	33.75
B2	33.05
B3	34.01

Variable Charts

Measured Data

Length, width, height, time, weight, etc.

Often contains decimals (e.g. .006, 8.9, 74.05)

Samples used to analyze large runs of product by manufacturers.

Sub-groups

2-5
- diameters, lengths
- tensile strength
- resistance

XbarR

Sample	Obs 1	Obs 2	Obs 3	Obs 4	Obs 5
S1	22.3	22.5	22.0	22.6	22.7
S2	22.9	22.7	22.4	22.6	22.7
S3	22.9	22.7	22.5	22.3	22.6
S4	22.4	22.7	22.5	22.4	22.5
S5	22.6	22.7	22.8	22.6	22.3
S6	22.4	22.3	22.8	22.7	22.5
S7	22.2	22.4	22.9	22.5	22.4

Sub-groups

6-25
- diameters, lengths
- tensile strength
- resistance

XbarS