

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

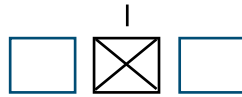
Count defective items or defects.

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)

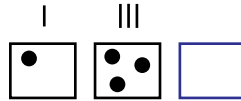
Count Defective Items



Is it Defective?



Count Defects



Can have more than one defect per item.

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

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

Variable Charts

Measured Data

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



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

How many sub-groups?

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

■ ■ ■
Individuals

■ ■ ■
Sub-groups

Samples used to analyze large runs of product by manufacturers.

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



You don't need to learn these rules because they are coded right into QI Macros Control Chart wizard
Download 30-day trial at www.qimacros.com