P Flag question

A quality control engineer uses attributes control charts. 40 samples each of sample size of 40 cans are randomly collected. The total number of nonconforming cans was 160 cans. The UCL of the control chart for fraction nonconforming is ------

242.1%>

Question 2

Not yet answered

Marked out of 1.00

⚑ Flag question

When introducing a new machine or changes in raw material, ------- -- pattern may appear in the control chart.

Select one:

○ cyclic

○ stratification

◉ shift in process level

○ mixture

[Clear my choice](#)

Question 3

Not yet answered

Marked out of 2.00

⚑ Flag question

A control chart for monitoring the average number of nonconformities per unit is established. Twenty sample of variable sample sizes are collected. The sum of sample sizes = 400. The total number of nonconformities = 200. The UCL value of the 4-sigma chart based on the average sample size will be ----------

13

I

A control chart for monitoring the average number of nonconformities per unit is established. Thirty sample of variable sample sizes are collected. The sum of sample sizes = 600. The total number of nonconformities = 300. The UCL value of this chart based on the average sample size will be -------- ----

☰ 🌐 🔔 💬

Question 11

Not yet answered

Marked out of 2.00

⚑ Flag question

Twenty-five samples; each sample of size of 4 bottles, are collected. The specifications on a normally distributed quality characteristic is at least 625. Using the X-bar and R control charts, the estimates of process mean and standard deviation are 643 and 9, respectively.

The fraction conforming is--------

↧ | A▾ | **B** | *I* | ☰ | ☷

🔗 | ⤬ | 🖼

Twenty-five samples; each sample of size of 4 bottles, are collected from an e

average of averages = 625   Estimate of process standard deviation= 16

If the process mean shifts to 621, the probability to detect the shift by the first so
_____

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When measurement data are not available, use ------------ c

Select one:

○ scatter diagram

◉ Attributes

○ run or tier

○ Variables

Clear my choice

stion 8
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stion

Twenty samples are collected and then the total number of nor
The inspection unit is defined as 2 products. The inspector colle
of the proper control chart will be ------

↕   A ▾   B   I   ≡   ≡   ∞   ᔆ   ☒

A control chart is developed to monitor the number of nonconforming units. Twenty samples were collected; each of sample size of 50 units. The sum of nonconforming units is 100. The UCL of the proper 2-sigma control chart will be ------

A ▾   B   I   ☰   ☰   %   ✂   🖼

1

The specifications on a quality characteristic are: USL =640   LSL = 610

Using the x-bar and R charts, the following estimates for process mean and standard deviation are 622 and 3, respectively. The value of the potential capability index is ----

1.667

Question 1

Not yet answered

Marked out of 1.00

⚑ Flag question

If the cost of inspection is not excessive, then high-speed production processes are often monitored with ----------

Select one:

○ moderately large sample size less frequent

○ moderately small sample size more frequent

◉ moderately large sample size more frequent

○ moderately small sample size less frequent

Clear my choice

Twenty samples are collected; each sample of size of 6 bottles. Given:
average of sample averages = 620
Average of sample standard deviations = 9

The UCL of the 2-sigma s chart will be ----------

Twenty-five samples; each sample of size of 9 bottles, are collected from an existing critical process. Given the estimates of process mean = 360 estimate of process standard deviation = 9

x-bar: UCL= 369

The probability of type I error is ------ --

Question 7

Not yet answered

Marked out of 1.00

⚑ Flag question

The proper control chart for monitoring a variable quality characteristic with a sample size of one is ----------.

Select one:

◉ I-MR

○ u chart

○ x-bar and s charts

○ c chart

Clear my choice

Question 8

Twenty-five samples, each sample of size of 4 bottles, are collected from an existing process. Given:

average of averages = 825   Estimate of process standard deviation= 18

If the process mean shifts to 825, the probability to detect the shift by the first sample following the shift will be ~

Question 17

Given:

USL = 640   LSL = 610   Target = 622

Using x-bar and s charts, the estimates of process mean and standard deviation are 622 and 5, respectively. The value of the proper process capability index is

1

Question 18

A control chart is established to monitor total number of nonconformities in a unit. Fifty samples; where

Twenty samples are collected; each sample of size of 5 bottles. Given:
average of sample averages = 625
Average of sample ranges = 9

The UCL of the 4-sigma x-bar chart will be ----------

Question 12

Not yet answered

Marked out of 2.00

⚑ Flag question

Twenty-five samples are collected; each sample of size of 5 bottles. Given:
average of sample averages = 624
Average of sample standard deviations= 4

The UCL of the 4-sigma s chart will be ---------

Question 10

Not yet answered

Marked out of 2.00

⚑ Flag question

Twenty samples; each sample of size of 7 bottles, are collected from an existing critical process. Given the standard values for mean and variance of 10 and 2.25, respectively.

The LCL of the s chart is--------

⚑ Flag question

Control charts are effective in ------------.

- ○ a. defect production
- ◉ b. defect detection
- ○ c. out-of-control
- ○ d. defect prevention

Clear my choice

Question **12**

Not yet answered

A control chart is established to monitor total number of nonconformities in a unit. Fifty samples; where in each 10 products are inspected. The inspection unit is defined as 10 products. The total number of nonconformities is 50.

The UCL value of the proper 4-sigma control chart will be ---

23

A control chart is developed to monitor the number of nonconforming units. Twenty samples were collected; each of sample size of 50 units. The sum of nonconforming units is 100. The UCL of the proper 2-sigma control chart will be ------

Question 2

Not yet answered

Marked out of 1.00

⚑ Flag question

When introducing a new machine or changes in raw material, --------- pattern may appear in the control chart.

Select one:

- ○ cyclic
- ○ stratification
- ◉ shift in process level
- ○ mixture

Clear my choice

Question 3

Not yet answered

Marked out of 2.00
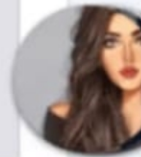
⚑ Flag question

Control charts for x-bar and s are maintained on the tensile strength of a metal fastener. After 30 samples of size n = 9 are analyzed, it was found that

$$\sum_{i=1}^{30} \bar{x}_i = 12{,}870 \quad \text{and} \quad \sum_{i=1}^{30} s_i = 410$$

Calculate:

(a) the limits of the x-bar chart

sample size of n = 5.

$$\sum_{i=1}^{30} \bar{x}_i = 2{,}700 \quad \text{and} \quad \sum_{i=1}^{30} R_i = 1$$

Calculate:

(a) UCL of the x-bar

(b) 2-sigma UCL of the R-bar

(c) The LNTL

| I | B | ▾A | ↴ |

A)92.308

B)6.9716

C)84.84

☰   🌐   👤 ▾

nonconformit Time left 0:59:32 established in conjunction with final inspection of a device. The inspection unit is to be a group of 18 devices. The average number of nonconformities per radio has, in the past, been 0.5. The two-sigma of the appropriate control chart for this size inspection unit is ---- -----

○ 18

○ 9

○ 1.21

◉ 15

○ None

The x-bar and

used to monitor thickness.
The following are calculated:

x-bar chart: CL = 90 UCL= 102 (n=4)

Specifications are 89±15

The value of the potential process capability index is -- ----------

- a. 0.667
- b. None
- ● c. 0.625
- d. 0.583
- e. 0.625

Clear my choice

Flag question

Time left 0:43:42

The fraction nonconforming control chart was constructed (n=100). The UCL and CL are calculated as 0.19 and 0.1, respectively. Then, the LCL is -----------

○ 0.01

○ -0.01

○ 0.09

○ 0.07

◉ None

Clear my choice

Next page

A control chart for monitoring the average number of nonconformities per unit is established. Twenty sample of variable sample sizes are collected. The sum of sample sizes = 400. The total number of nonconformities = 200. The UCL value of the 4-sigma chart based on the average sample size will be ----------

13

(a) the limits of the x-bar chart

(b) the a-risk associated with the chart?

(c) ARL

a) ucl=443.09

cl=429

lcl=414.90

b) 0.00269

c) 371.74

x-double bar=429   s-bar=13.666667

a) CL=429

UCL= 429+1.032*13.66667= 443.104

LCL= 414.896

b) alpha=1-(ϕ (3)-ϕ (-3)) =0.0027

c) ARL=1/alpha = 370

More   Edit

Control charts for x-bar and s (n = 9) are maintained on the tensile strength of a metal fastener, it was found that

$$\sum_{i=1}^{30} \bar{x}_i = 12,870 \quad \text{and} \quad \sum_{i=1}^{30} s_i = 41($$

Specifications on this quality characteristic are at least 412. Calculate

(a) The CL of the s-chart

(b) Fraction conforming.

a)13.66
b)0.88493

x-double bar= 12870/30=429   s-bar=410/30=13.66667

a) 13.666667

b) p(x>=412)=p(z>= (412-429)/(13.66667/0.9693)

= p(z>=-1.2057) = 0.88686
        (2 PTS)

Question **10**

Not answered

Marked out of 3.00

⚑ Flag question

The net weight (in oz) of a dry bleach product is to be monitored by x-bar and R control charts using

Mark 1.00 out of 1.00

⚑ Flag question

Sometimes a point will plot outside the control limits on both the I-MR charts. It is most likely an indication --------------- that the mean is out of control and not an indication that both the mean

○ a. that the variance is out of control and not an indication that both the mean variance of the process are out of control

◉ b. that the mean is out of control and not an indication that both the mean variance of the process are out of control ✔

○ c. process is incontrol

○ d. that both the mean and the variance of the process are out of control

Question 4

Incorrect

Mark 0.00 out of 1.00

Mark 0.00 out of 1.00

⚑ Flag question

Please select the correct answer

○ a. six points in a row on both ✖
   sides of the center line
   with none in zone C
   indicates that the process
   is out-of-control

○ b. the cause-and-effect
   diagram is a formal tool
   frequently useful in
   unlayering actual causes.

○ c. Pareto chart is simply a
   frequency distribution (or
   histogram) of attribute data
   arranged by category.

○ d. The scatter diagram is a
   useful plot for identifying a
   potential relationship
   between three variables.

Question 5

Complete

Mark 3.00 out of 3.00

⚑ Flag question

Question 11

Not yet answered

Marked out of 2.00

⚑ Flag question

Twenty-five samples; each sample of size of 4 bottles, are collected. The specifications on a normally distributed quality characteristic is at least 625. Using the X-bar and R control charts, the estimates of process mean and standard deviation are 643 and 9, respectively.

The fraction conforming is--------
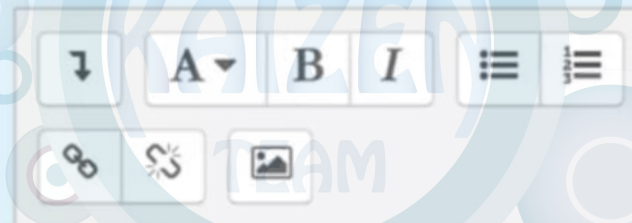
Twenty-five samples; each sample of size of 9 bottles, are collected from an existing critical process. Given the estimates of process mean = 360 estimate of process standard deviation = 9

x-bar: UCL= 369

The probability of type I error is --- -- --

$$\sum_{i=1}^{30} \bar{x}_i = 2{,}700 \quad \text{and} \quad \sum_{i=1}^{30} R_i = 120$$

Calculate:

(a) UCL of the x-bar

(b) 2-sigma UCL of the R-bar

(c) The LNTL

a) 92.308

b) 6.971

c) 84.84

m=30 x-double bar=90 R-bar=4

a) UCL=90+0.577*4=92.308

b) UCL= 4*(1+2*0.864/2.326) = 6.97163

c) LNTL= 90 – 3*4/2.326 = 84.8409

Given the following information the x-bar and s charts (standard values of mean and variance are known):

x-bar chart: UCL = 400   CL= 382   n=9

If the mean shifts to 385, calculate the probability that the shift will be detected by the second sample.

0.19264

beta= $\phi(400-385/6)-\phi(364-385/6)=\phi(2.5)-\phi(-3.5)=0.99356$

prob= $B(1-B)=0.0064$

Question 7

Not yet answered

Marked out of 1.00

⚑ Flag question

The proper control chart for monitoring a variable quality characteristic with a sample size of one is ----------.

Select one:

- ⦿ I-MR
- ◯ u chart
- ◯ x-bar and s charts
- ◯ c chart

Clear my choice

More

Question 8

Given the following information (standard values of mean and variance are known):

x-bar chart: UCL = 409   CL= 382   n=9

Calculate:

(a) UCL of the R-chart

(b) UCL of the s-chart

a)145.49

b)

sigma=27 D2= 5.393 B6= 1.707

a) UCL=5.393*27= 145.611

b)UCL= 1.707*27=46.089

The net weight (in oz) of a dry bleach product is to be monitored by x-bar and R control charts using a sample size of n = 5.

$$\sum_{i=1}^{30} \bar{x}_i = 2{,}700 \text{ and } \sum_{i=1}^{30} R_i = 120$$

Calculate:

(a) UCL of the x-bar

(b) 2-sigma UCL of the R-bar

(c) The LNTL

a)92.308

b)6.971

c)84.84

m=30 x-double bar=90 R-bar=4

a)UCL=90+0.577*4=92.308

The net weight (in oz) of a dry bleach product is to be monitored by x-bar and R control charts using a sample size of n = 5.

$$\sum_{i=1}^{30} \bar{x}_i = 2{,}700 \quad \text{and} \quad \sum_{i=1}^{30} R_i = 120$$

Calculate:
(a) estimated process mean
(b) estimated process standard deviation.
(c) UCL of the corresponding s-chart

The x-bar and s charts are used to monitor thickness. The following are calculated:

x-bar chart: CL = 90 UCL= 102 (n=4)

Specifications are 89±15

The value of the actual process capability index is ------------

- a. 0.667
- b. 0.583
- c. 1.75
- ● d. 0.625
- e. None

Clear my choice

The c chart was constructed using twenty samples each of four items. The inspection unit was defined as 4 items. The sum of total nonconformities = 40. Suppose that the inspection unit was defined as eight items. The UCL for monitoring future production is -----------

- ○ a. 2

- ○ b. 6.25

- ○ c. 4

- ○ d. 10

A process is being controlled with a fraction nonconforming control chart. The process average has been shown to be 0.05. Two-sigma control limits are used, and the procedure calls for taking daily samples of 50 items. The UCL will be ----

- 0.11165
- 0.1425
- -0.0116
- zero
- None

Clear my choice

Time left 0:08:54

Consider the following information:

Individual chart: Center line = 700

MR-chart: Center line = 9
LCL = 0

The UCL of Individual control chart will be ------------

🔘 a. None

⚪ b. 723.94

⚪ c. 707.98

⚪ d. 29.403

⚪ e. 0

Clear my choice

c. If the c[...] with producing defective items is high, larger, less frequent samples are better than smaller, more frequent ones.

d. If per unit inspection and testing costs are not excessive, high-speed production processes are often monitored with moderately large sample sizes.

Clear my choice

Next page

Question 5

Not yet answered

Marked out of 2.00

⚑ Flag question

A control chart for monitoring the average number of nonconformities per unit is established. Thirty sample of variable sample sizes are collected. The sum of sample sizes = 600. The total number of nonconformities = 300. The UCL value of this chart based on the average sample size will be ----------

0.5866

More

The c chart was constructed using twenty samples each of four items. The inspection unit was defined as 4 items. The sum of total nonconformities = 40. Suppose that the inspection unit was defined as eight items. The UCL for monitoring future production is -----------

- a. 2
- b. 6.25
- c. 4
- ● d. 10

Clear my choice

Time left 0:37:10

Consider the following information (n=4):

x-bar: UCL = 710 Center line = 700 LCL = 690

s-chart: UCL = 18.08 Center line = 7.979 LCL = 0

Suppose the process mean shifts to 692 and the standard deviation simultaneously shifts to 12. Find the probability of detecting this shift on the chart on the first subsequent sample.

○ a. 0.22798

○ b. 0.42241

The fraction nonconforming control chart was constructed ($n=80$). The CL are calculated is 0.1. Then, the corresponding LCL of the number nonconforming control chart is ----------

- ⦿ 8
- ○ 18
- ○ 1
- ○ 10
- ○ None

Clear my choice

Next page

☰   🌐 👤 ▼

S-chart.   UCL = 18.08 Center
line = 7.979   Ll Time left 0:37:13

Suppose the process mean
shifts to 692 and the
standard deviation
simultaneously shifts to 12.
Find the probability of
detecting this shift on the
chart on the first subsequent
sample.

○ a. 0.22798

○ b. 0.42241
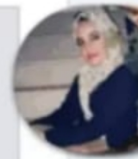
○ c. 0.77202

⦿ d. None

○ e. 0.5776

Clear my choice

Question **10**

Not yet answered

Marked out of 2.00

⚑ Flag question

Twenty samples; each sample of size of 7 bottles, are collected from an existing critical process. Given the standard values for mean and variance of 10 and 2.25, respectively.

The LCL of the s chart is--------

More

Question 17

Answer saved

Marked out of 2.00

⚑ Flag question

Given:

USL = 640   LSL = 610   Target = 622

Using x-bar and s charts, the estimates of process mean and standard deviation are 622 and 5, respectively. The value of the proper process capability index is

| ↰ | A▾ | B | I | ≣ | ≣ | % | ⌀ | 🖼 |

1

Question 18

A control chart is established to monitor total number of nonconformities in a unit. Fifty samples, where

Correct

Mark 1.00 out of 1.00

Please select the correct answer:

If the cost associated with producing

- a. large sample size more frequently
- b. large sample size less frequently
- ● c. small sample size more frequently ✔
- d. small sample size less frequently

Question 2

Complete

Mark 0.00 out of 2.00

Given the following information the x-bar and s charts (standard values of mean and variance are known):
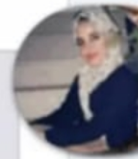
x-bar chart: UCL = 400   CL =

Question 12

Not yet answered

Marked out of 2.00

⚑ Flag question

Twenty-five samples are collected; each sample of size of 5 bottles. Given:

average of sample averages = 624
Average of sample standard deviations= 4

The UCL of the 4-sigma s chart will be ----------

Given the following information (standard values of mean and variance are known):

x-bar chart: UCL = 409

CL= 382   n=9

改善   Calculate:

(a) UCL of the R-chart

(b) UCL of the s-chart

TEAM

A) 145.611

B)46.089

a) 90

b) 1.71969

c) s-bar= 1.6165

UCL= 1.6165*2.089=3.3768685

Finish review

Quiz navigation
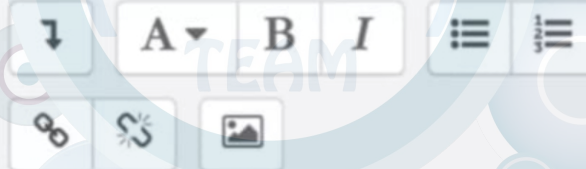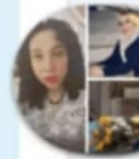
Meeting in 'Industrial Qu...
05:37 42 attendees

AA

Abbas AL-Refai

A control chart for monitoring the average number of nonconformities per unit is established. Thirty sample of variable sample sizes are collected. The sum of sample sizes = 600. The total number of nonconformities = 300. The UCL value of this chart based on the average sample size will be ------------

A process that is operating in the presence of ------- is said to be an out-of-control process

- a. a run of less than 8 points

- b. chance causes

- c. random pattern

- ● d. assignable causes
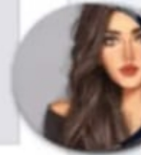
Clear my choice

Previous page   Next page

Question 1

Not yet answered

Marked out of 1.00

⚑ Flag question

If the cost of inspection is not excessive, then high-speed production processes are often monitored with ----------

Select one:

○ moderately large sample size less frequent

○ moderately small sample size more frequent

◉ moderately large sample size more frequent

○ moderately small sample size less frequent

Clear my choice

More