ASQ

Exam Questions CSSBB

Certified Six Sigma Black Belt

NEW QUESTION 1
- (Topic 1)
Find the value of (8) in the ANOVA table. Assume:

$\alpha = 0.10$

ANOVA Table

Source	SS	df	MS	F ratio	F crit	P-value
x	1.48	1	(1)	(2)	(3)	(4)
Y	18.6	1	(5)	(6)	(7)	(8)
xxY	12.2	1	(9)	(10)	(11)	(12)
Error	2.1	4	(13)			

A. 16.4
B. 3.2
C. 18.6
D. 23.2
E. 4.54
F. 12.2
G. 0.525
H. 2.82
I. 1.48
J. 35.4
K. 0.10<P<1
L. 0.05<P<0.10
M. 0.01<P<0.05
N. 0.005<P<0.01
O. 0<P<0.005

Answer: O

NEW QUESTION 2
- (Topic 1)
Deming called the technique of studying a sample to gain understanding of the distribution of a population an “enumerative study.” His main objection to these studies was:

A. they are too difficult to perform correctly
B. they require extensive use of computers
C. they assume a stable distribution
D. random samples are expensive to obtain
E. these studies have a high probability of Type II error

Answer: C

NEW QUESTION 3
- (Topic 1)
Calculate the interaction effect

Run #	A	B	Ave. Response
1	–	–	129
2	–	+	133
3	+	–	86
4	+	+	80

A. 1.5
B. 205
C. –5
D. 17
E. –17

Answer: C

NEW QUESTION 4
- (Topic 1)

Run #	A	B	Ave. Response
1	–	–	129
2	–	+	133
3	+	–	86
4	+	+	80

This experimental design is an example of:

A. full factorial
B. half fractional factorial
C. fractional factorial
D. ANOVA design

Answer: A

NEW QUESTION 5
- (Topic 1)

	size			
	.500	.625	.750	.875
Nut	146	300	74	41
Washer	280	276	29	32
Bolt	160	214	85	55

This table displays the inventory of fasteners in a storage cabinet. An item is selected at random from the fastener cabinet. Find the approximate probability it is a 1/2 inch bolt.

A. .65
B. .30
C. .09
D. .35
E. none of the above

Answer: C

NEW QUESTION 6
- (Topic 1)
A higher resolution number for an experimental design indicates that:

A. results are more clear
B. confounding between main effects and interaction effects are less likely to be significant
C. a higher number of replications have been used
D. all factors have been tested at all levels
E. the design is more balanced

Answer: B

NEW QUESTION 7
- (Topic 1)
The preferred method for determining statistically whether factor A or B is significant requires what additional information?

Run #	A	B	Ave. Response
1	–	–	129
2	–	+	133
3	+	–	86
4	+	+	80

A. value of noise factors
B. values of responses in replicate runs
C. number of repetitions
D. ambient conditions during the experiment
E. blocking pattern

Answer: B

NEW QUESTION 8
- (Topic 1)
(Refer to the previous problem) The variance of the five replications for each run is calculated. Most of these variances are approximately equal but two are significantly lower than the others. The experimenters would be especially interested in those two runs if they want to optimize:

A. dissolution time
B. interactions
C. main effects
D. robustness
E. degrees of freedom

Answer: D

NEW QUESTION 9
- (Topic 1)
A team working with a plant relocation is tasked with designing a process for moving 180 pieces of equipment. Incoming orders may need to be filled during the move at either the old site or the new one. Transportation equipment availability is uncertain. Construction schedules at the new site is very weather dependent. The team designs a chart that attempts to cover these and other contingencies with appropriate measures dealing with each. The tool best fitted for this task is:

A. Affinity diagram
B. Inter-relationship digraph
C. Tree diagram
D. Process decision program chart
E. Matrix diagram
F. Prioritization matrix
G. Activity network diagram

Answer: D

NEW QUESTION 10
- (Topic 1)
A population of size 1,000,000 has mean 42 and standard deviation 6. Sixty random samples, each of size 15 are selected. According to the Central Limit Theorem the distribution of the sixty sample means has a standard deviation of approximately:

A. 6
B. 6/42
C. 6/15
D. 6/ 15
E. none of the above

Answer: D

NEW QUESTION 10
- (Topic 1)
A quality engineer employed by a hospital is asked to improve the process of medication storage in locked cabinets near patient doors. One defect that occurs rarely is that the medication caddy is left out when the cabinet is relocked. The engineer installs a gravity activated arm that will not permit the door to close when the caddy isn’t inside. This improvement is best described by which approach to problem solving?

A. 5S
B. Poka yoke
C. Kaizen

D. PDCA
E. Re-engineering

Answer: B

NEW QUESTION 11
- (Topic 1)
The principle disadvantage of fractional factorial experiments is that:

A. experimental error is high
B. robustness is compromised
C. effects are confounded
D. measurements are less precise
E. analysis is more difficult

Answer: C

NEW QUESTION 15
- (Topic 1)
Find the value of (9) in the ANOVA table. Assume:

$\alpha = 0.10$

ANOVA Table

Source	SS	df	MS	F ratio	F crit	P-value
x	1.48	1	(1)	(2)	(3)	(4)
Y	18.6	1	(5)	(6)	(7)	(8)
xxY	12.2	1	(9)	(10)	(11)	(12)
Error	2.1	4	(13)			

A. 16.4
B. 3.2
C. 18.6
D. 23.2
E. 4.54
F. 12.2
G. 0.525
H. 2.82
I. 1.48
J. 35.4
K. 0.10<P<1
L. 0.05<P<0.10
M. 0.01<P<0.05
N. 0.005<P<0.01
O. 0<P<0.005

Answer: F

NEW QUESTION 18
- (Topic 1)
A team is investigating ways to reduce power outages. They determine that an outage can occur in only three ways: grid failure, local transformer failure or local overload. They then investigate each of these three events for possible causes, etc. They draw a diagram that “fans out” using the power outage as the handle of the fan. These improvements are best described by which approach to problem solving?

A. Affinity diagram
B. Inter-relationship digraph
C. Tree diagram
D. Process decision program chart
E. Matrix diagram
F. Prioritization matrix
G. Activity network diagram

Answer: C

NEW QUESTION 23
- (Topic 1)
This table displays the inventory of fasteners in a storage cabinet. An item is selected at random from the fastener cabinet. Find the approximate probability it is size 3/4.

	size			
	.500	.625	.750	.875
Nut	146	300	74	41
Washer	280	276	29	32
Bolt	160	214	85	55

A. .85
B. .185
C. .03
D. .11
E. none of the above

Answer: D

NEW QUESTION 28
- (Topic 1)

	size			
	.500	.625	.750	.875
Nut	146	300	74	41
Washer	280	276	29	32
Bolt	160	214	85	55

This table displays the inventory of fasteners in a storage cabinet. An item is selected at random from the fastener cabinet. Find the approximate probability it is larger than 1/2.

A. .35
B. .65
C. .1106
D. .47
E. none of the above

Answer: B

NEW QUESTION 32
- (Topic 1)
SWOT is an acronym for:

A. strengths, weaknesses, opportunities, threats
B. statistics without tables
C. sensory Weibull ordinal tools
D. success wields optimal teams
E. none of the above

Answer: A

NEW QUESTION 37
- (Topic 1)
An experiment has seven factors with two levels each. The experiment has eight runs. This experimental design is called:

A. full factorial design
B. half fractional factorial design
C. interaction
D. none of the above

Answer: D

NEW QUESTION 41
- (Topic 1)
There are 14 different defects that can occur on a completed time card. The payroll department collects 328 cards and finds a total of 87 defects. DPU =

A. 87 ÷ 328
B. 87 ÷ (328 × 14)
C. 14 ÷ 87
D. 87 ÷ 14
E. 328 ÷ 87
F. 87 × 1,000,000 ÷ (14 × 328)

Answer: A

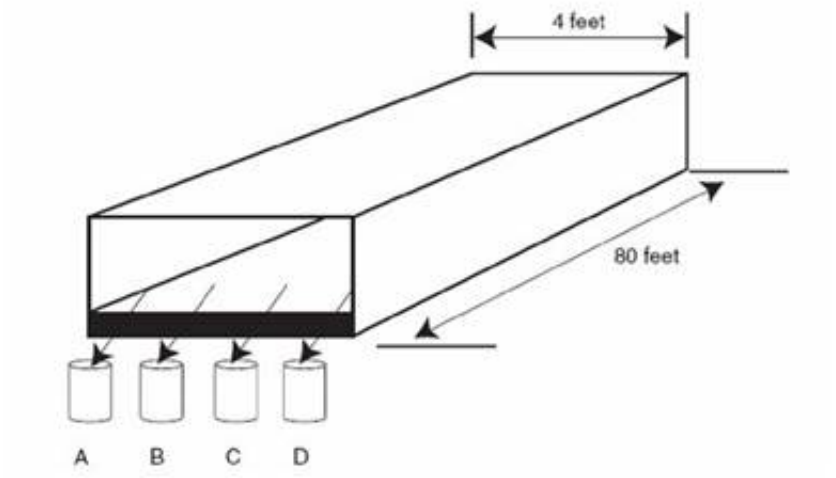
NEW QUESTION 46
- (Topic 1)
Intuitively, which factor A or B seems most likely to be significant?

Run #	A	B	Ave. Response
1	–	–	129
2	–	+	133
3	+	–	86
4	+	+	80

A. A
B. B
C. C
D. neither
E. both about equally significant

Answer: A

NEW QUESTION 51
- (Topic 1)
SCENARIO A Six Sigma team is measuring the moisture content of corn starch as it leaves the conveyer belt of a dryer. They collect one sample four cups of starch at times indicated in the chart at fixed locations labeled A, B, C, and D across the end of the belt. See the diagram below.

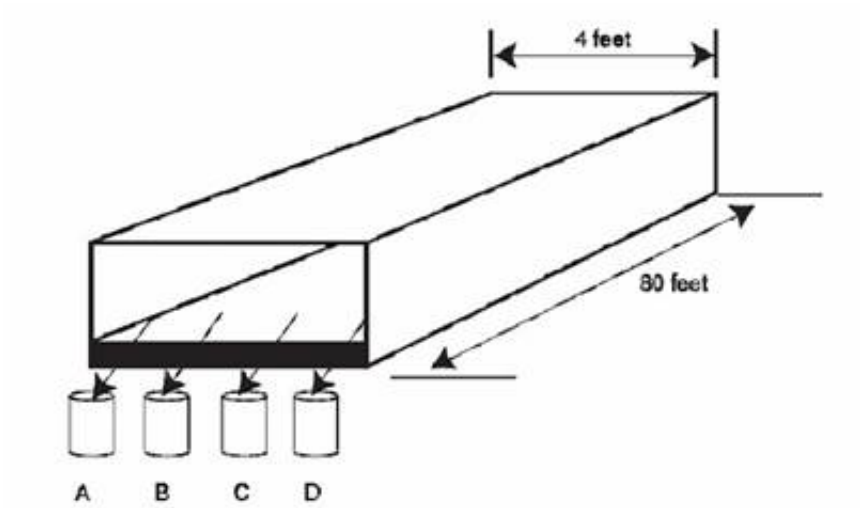


Find the sample linear correlation coefficient and the sample coefficient of determination for the data in problem VI.11.

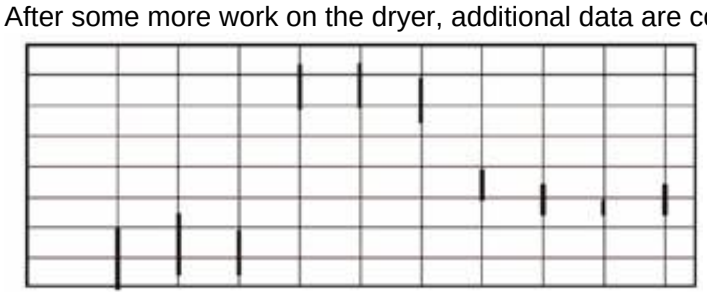
A. 0.83, 0.69
B. 0.49, 0.24
C. 0.74, 0.55
D. 0.33, 0.11

Answer: B

NEW QUESTION 55
- (Topic 1)
SCENARIO A Six Sigma team is measuring the moisture content of corn starch as it leaves the conveyer belt of a dryer. They collect one sample four cups of starch at times indicated in the chart at fixed locations labeled A, B, C, and D across the end of the belt. See the diagram below.



After some more work on the dryer, additional data are collected which when plotted looks like this:



Which type of variation dominates?

A. within sample
B. sample to sample within the hour
C. hour to hour
D. none of the above

Answer: C

NEW QUESTION 56
- (Topic 1)
If the probability that an event will occur is 0.83, then the probability that the event will not occur is:

A. 0.17
B. 0.07
C. 0.6889
D. 1.20
E. 83%

Answer: A

NEW QUESTION 61
- (Topic 1)
An automatic gaging system is to be installed in a process. The gage will insert data values into a data base from which machine adjustments will be made automatically. A critical factor in specifying the equipment is:

A. communication link between gage and computer
B. compatibility of software in the gage and in the computer
C. adequate manual over-rides
D. all of the above

Answer: D

NEW QUESTION 66
- (Topic 1)
= 0.05 The average weight of castings produced at the Nebraska foundry is 3.7 lbs. A new supplier from Kansas has submitted a batch of castings known to have normally distributed weights. A random sample of 10 has an average weight of 3.6 lbs. and standard deviation 0.06 lbs. Do these data indicate that the Kansas foundry produce lighter castings on average?

A. yes
B. no

Answer: A

NEW QUESTION 69
- (Topic 1)
A medicine with efficacy of .52 is given to five patients. Find the approximate probability that at least one of the patients is cured. (Hint: Use the binomial formula.)

A. .975
B. .480
C. .531
D. .416
E. none of the above

Answer: A

NEW QUESTION 70
- (Topic 1)
The Toronto plant produces appliances in the following distribution: Type A 23% Type B 42% Type C 35% A random sample of 300 appliances from the Texas plant has the following distribution: Type A 73 Type B 111 Type C 116 Is the distribution of appliances at the Texas plant the same as that at the Toronto plant?

A. yes
B. no

Answer: B

NEW QUESTION 71
- (Topic 1)
A population of size 1,000,000 has mean 42 and standard deviation 6. Sixty random samples, each of size 15 are selected. According to the Central Limit Theorem the distribution of the sixty sample means has a mean of approximately:

A. 42
B. 42/6
C. 42/15
D. 42/ 15
E. none of the above

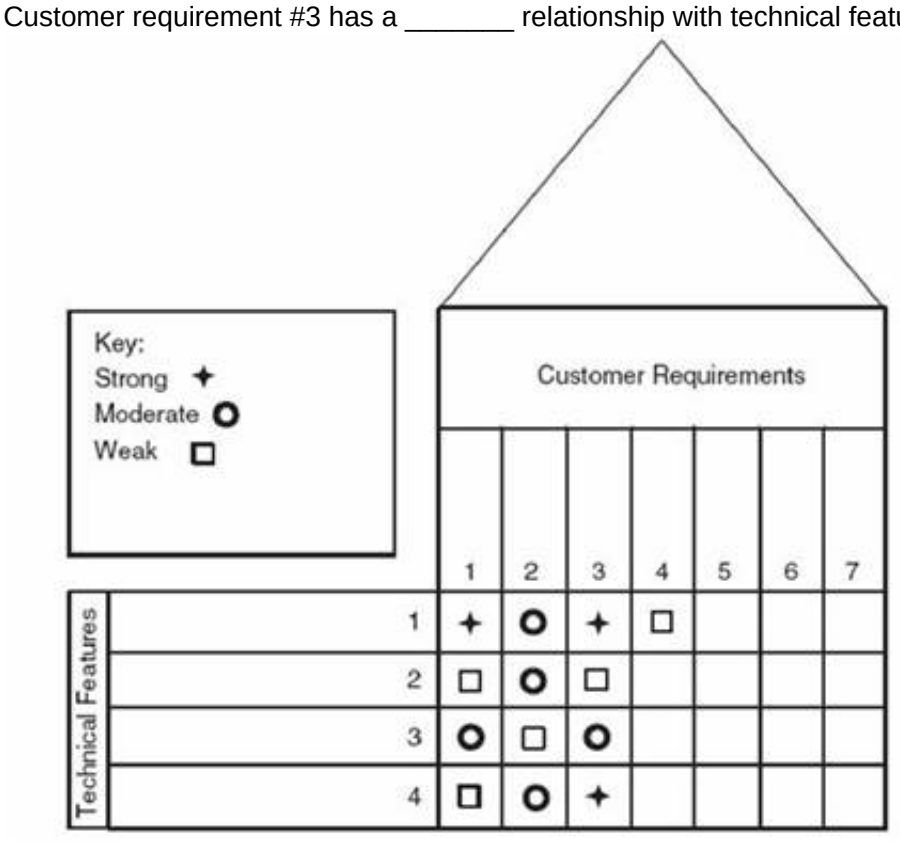
Answer: A

NEW QUESTION 73
- (Topic 1)
A quality leader who did extensive work with Japanese industry is:

A. Juran
B. Ishikawa
C. Deming
D. Ohno
E. Taguchi
F. all of the above
G. none of the above

Answer: F

NEW QUESTION 78
- (Topic 1)
Customer requirement #3 has a _____ relationship with technical feature #3.



A. strong
B. moderate
C. weak

Answer: B

NEW QUESTION 81
- (Topic 1)
The quality leader most associated with the concept of robustness:

A. Juran
B. Ishikawa

C. Crosby
D. Feigenbaum
E. Taguchi
F. none of the above

Answer: E

NEW QUESTION 85
- (Topic 1)
If DPU = 0.022, the RTU is approximately:

A. 0.022
B. 0.078
C. 0.0022
D. 0.98
E. 0.098
F. 0.0098

Answer: D

NEW QUESTION 88
- (Topic 1)
An engineer wants to try two hardening ovens to see whether they have different hardness scores. She cuts 8 pieces of bar stock in half, putting half of each in oven A and the other half in oven B. The following data are collected: Do the data indicate that the ovens have different average scores? Assume differences are normally distributed.

Piece #	1	2	3	4	5	6	7	8
Oven A	20.3	19.7	21.4	22.0	21.6	21.0	20.8	20.8
Oven B	19.7	20.0	20.1	21.2	21.4	20.7	21.0	19.6

A. yes
B. no

Answer: B

NEW QUESTION 90
- (Topic 1)
In a resolution III fractional factorial experimental design, main effects are confounded with:

A. one factor interactions
B. two factor and higher interactions
C. three factor and higher interactions
D. no other effects

Answer: B

NEW QUESTION 92
- (Topic 1)
A team wants a technique for displaying the connection between various customer needs and various features on a product. They should use:

A. written and diagrammed work instructions
B. flow charts and process maps
C. cause and effect diagrams
D. Pareto chart
E. relationship matrix

Answer: E

NEW QUESTION 96
- (Topic 1)
Find Cp and Cpk.

A. 1.21 and .85
B. .85 and 1.21
C. .35 and .63
D. .63 and .42
E. none of the above

Answer: D

NEW QUESTION 97

- (Topic 1)
The support for an important quality initiative was lacking in congress until Reagan's Secretary of Commerce was killed in a horseback riding accident in 1987. That initiative was:

A. assigning National Institute for Standards and Technology (NIST) quality oversight duties
B. "consensus of the House" proclamation for Deming's 14 points
C. changing National Bureau of Standards to NIST.
D. authorizing the American National Standards Institute (ANSI) to join with the International Standards Organization (ISO) to promulgate standards.
E. none of the above.

Answer: E

NEW QUESTION 101
- (Topic 1)
The term "expected value" is closest to the term:

A. median
B. probabilistic model
C. mean
D. Markov value
E. regressive value

Answer: C

NEW QUESTION 102
- (Topic 1)
The leader in the quality movement who recommended that organizations "eliminate numerical quotas for the work force and numerical goals for management." :

A. Juran
B. Ishikawa
C. Crosby
D. Feigenbaum
E. Taguchi
F. none of the above

Answer: F

NEW QUESTION 105
- (Topic 2)
In a certain sampling situation, = 0, = 0.08. The power of the sampling plan in this case is:

A. 0.08
B. 1.00
C. 0.92

Answer: D

Explanation:

The formula for power of sampling plan is (1-) = 1-0.08 = 0.92

NEW QUESTION 108
- (Topic 2)
An example of a project metric would be:

A. the decrease in defect occurrence
B. the decrease in product cost
C. the decrease in cycle time
D. all the above

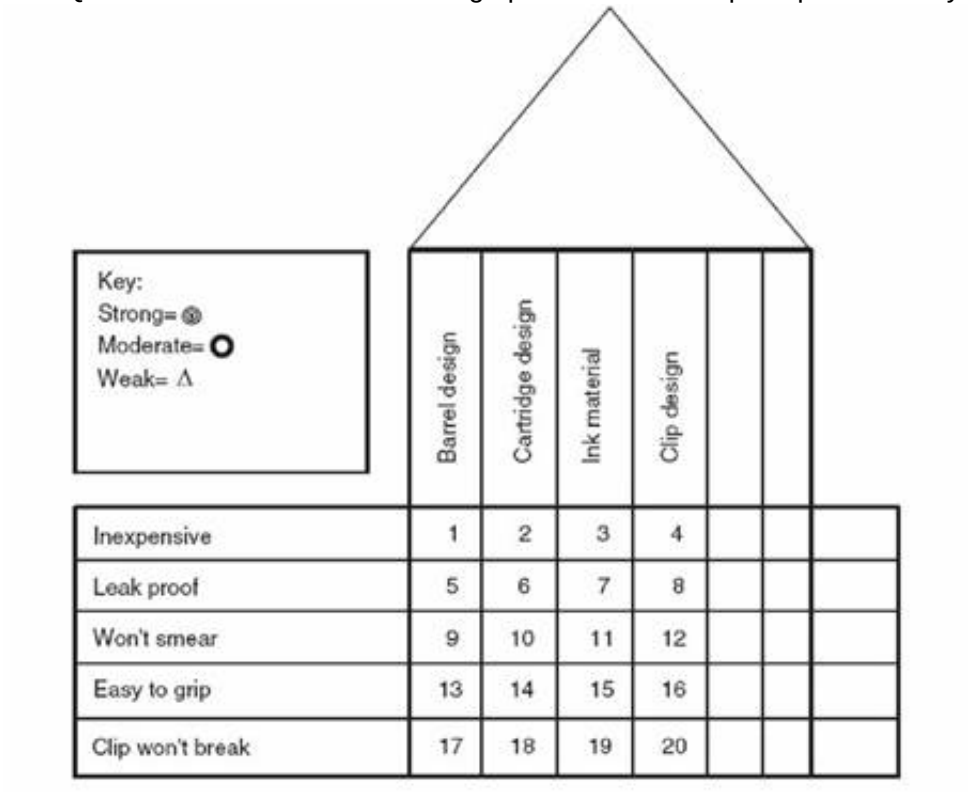
Answer: D

NEW QUESTION 113
- (Topic 2)
A set of data from a process has 8 readings per sample and 50 samples. The mean of the 50 sample means is 12.62. The mean of the 50 ranges is 0.18.A customer requires that SPC charts be done on their forms which have spaces for only 5 readings per sample. In preparation for calculating the new control limits the following question is asked, "Will the new average range be larger or smaller than the current average range?". The answer is:

A. yes
B. no
C. maybe
D. smaller
E. larger
F. same size
G. none of the above

Answer: D

NEW QUESTION 114
- (Topic 2)
This QFD matrix was used in the design process for a ball point pen. What symbol is appropriate for the square labeled 4?



A.
B.
C.

A. none of the above

Answer: B

NEW QUESTION 118
- (Topic 2)
An x-bar and R chart has four part measurements per sample The control limits on the averages chart are 2.996 and 3.256. Assume the process data form a normal distribution. What is the probability that the next part measurement falls outside the control limits?

A. 0.00135
B. 0.0027
C. 0.0681
D. 0.1362
E. 0.2724
F. none of the above

Answer: D

NEW QUESTION 123
- (Topic 2)
What percent of population falls below the lower specification limits?

A. 9.18%
B. 22.66%
C. 6.68 %
D. 1.83%

Answer: A

NEW QUESTION 126
- (Topic 2)
This will be a:

A. left-tail test
B. right-tail test
C. two-tail test

Answer: B

NEW QUESTION 128
- (Topic 2)
The following is a set of individual measurements: 3 5 4 5 6 3 4 3 2 4 5 6 5 7 6 4 5 5 8 7 6 6 7 7 4
Find the control limits for the individuals chart.

A. .7 and 11.2
B. 1.6 and 8.6
C. 2.7 and 7.5
D. none of the above

Answer: D

NEW QUESTION 130
- (Topic 2)
At a particular time, three components are in parallel and each has a reliability of 0.98. What is the reliability of the system?

A. 0.98
B. 0.94
C. 0.37
D. 0.26
E. none of the above

Answer: E

NEW QUESTION 135
- (Topic 2)
A meeting is called for all three shifts to determine the settings to be used on machine #45. This is an example of:

A. visual factory
B. kanban
C. poka-yoke
D. standard work
E. set up time reduction (SMED)

Answer: D

NEW QUESTION 140
- (Topic 2)
The word takt is closest to the theory of constraints word:

A. drum
B. buffer
C. rope
D. constraint

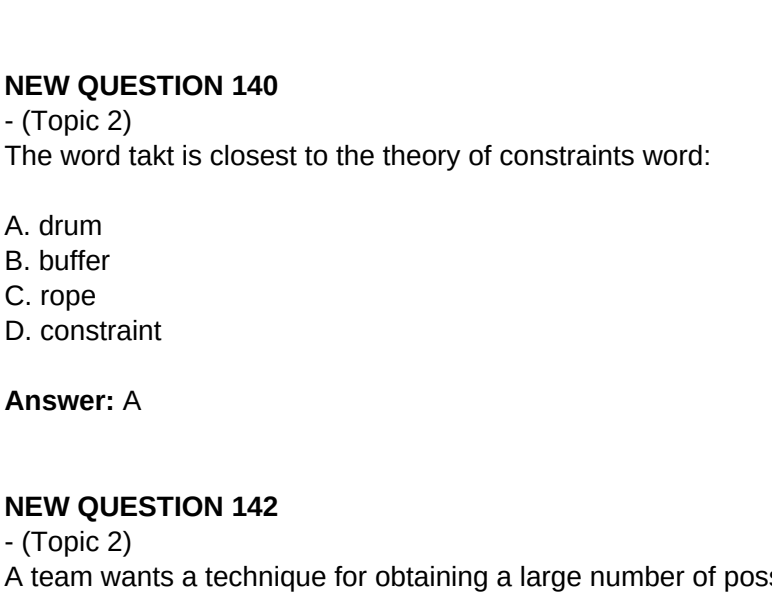
Answer: A

NEW QUESTION 142
- (Topic 2)
A team wants a technique for obtaining a large number of possible reasons for excess variation in a dimension. They should use:

A. written and diagrammed work instructions
B. flow charts and process maps
C. cause and effect diagrams
D. Pareto chart
E. relationship matrix

Answer: C

NEW QUESTION 144
- (Topic 2)
Which value of x will minimize transmitted noise?



A. X1
B. X2
C. X3
D. X4

Answer: C

NEW QUESTION 146
- (Topic 2)
The overall tolerance for three components in series in an electrical circuit Is+ 10 . Assuming normal, stable, capable processes produce the components, use stack tolerance techniques to find a set of tolerances for the three components.

A. 3, 3 and 4 respectively
B. 7, 7 and 6 respectively
C. 8, 8 and 8 respectively
D. 10, 10 and 14 respectively

Answer: D

NEW QUESTION 149
- (Topic 2)
The team development stage characterized by expression of individual opinions and ideas often without regard for team objectives is known as:

A. performing
B. norming
C. conflicting
D. storming
E. brainstorming

Answer: D

NEW QUESTION 151
- (Topic 2)
Find the value of (11) in the ANOVA table. Assume:

$\alpha = 0.10$

ANOVA Table

Source	SS	df	MS	F ratio	F crit	P-value
x	1.48	1	(1)	(2)	(3)	(4)
Y	18.6	1	(5)	(6)	(7)	(8)
xxY	12.2	1	(9)	(10)	(11)	(12)
Error	2.1	4	(13)			

A. Choices Not available (but this Question Answer E)

Answer: A

NEW QUESTION 153
- (Topic 2)
A process using a p-chart has pbar = 0.076 and nbar = 4.86. Find the control limits.

A. 0.069 and 0.083
B. 0.072 and 0.080
C. 0.040 and 0.112
D. 0.0756 and 0.0764
E. none of the above

Answer: C

NEW QUESTION 157
- (Topic 2)
The temperature in a storage location is logged once every 30 minutes. The control chart that is appropriate for displaying these values is:

A. x-bar and R
B. median
C. individual and moving range
D. p
E. np
F. u
G. c

Answer: C

NEW QUESTION 158
- (Topic 2)
A process shows the following number of defects. Each sample size for this process is 85. 3 8 2 7 7 6 8 8 9 5
What control chart should be used?

A. x-bar and R
B. median

C. individual and moving range
D. p
E. np
F. c
G. u
H. none of the above

Answer: F

NEW QUESTION 161
- (Topic 2)
Find the mean, median and mode of the following data set: 9, 11, 12, 12, 14, 18, 18, 18, 20, 23:

A. 15.5, 18, 18
B. 15, 14, 18
C. 14, 16, 18
D. 15, 12, 18
E. 15.5, 16, 18

Answer: E

NEW QUESTION 162
- (Topic 2)
An advantage of using standard deviation rather than range for measuring dispersion of a large sample is that:

A. standard deviation has a simpler formula
B. calculators have a standard deviation key but not a range key
C. standard deviation uses information from each measurement
D. range calculations are not normally distributed

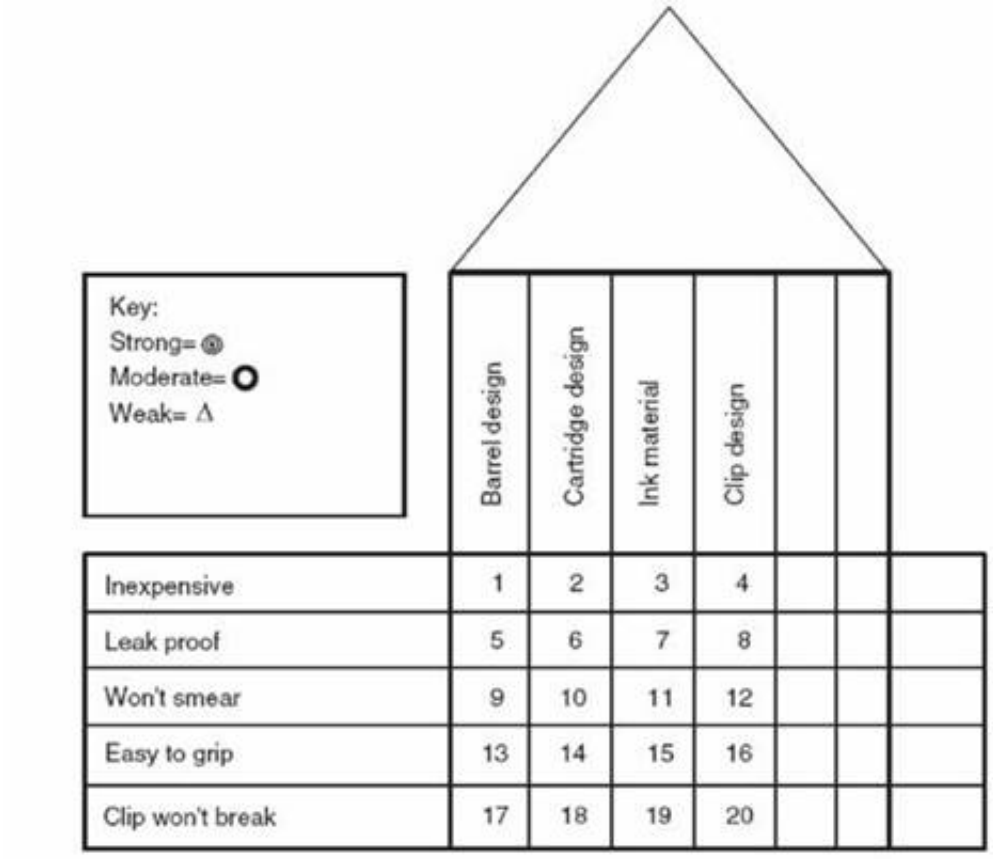
Answer: C

NEW QUESTION 165
- (Topic 2)
For a line in an FMEA form a team has established the following: Cost: $82 Severity: 7 Occurrence: 9 Detection: 4 Target date: 7 days What should the risk priority number (RPN) be for this line:

A. 144,648
B. 252
C. 1764
D. 63
E. none of the above

Answer: B

NEW QUESTION 166
- (Topic 2)
This QFD matrix was used in the design process for a ball point pen. What symbol is appropriate for the square labeled 7?

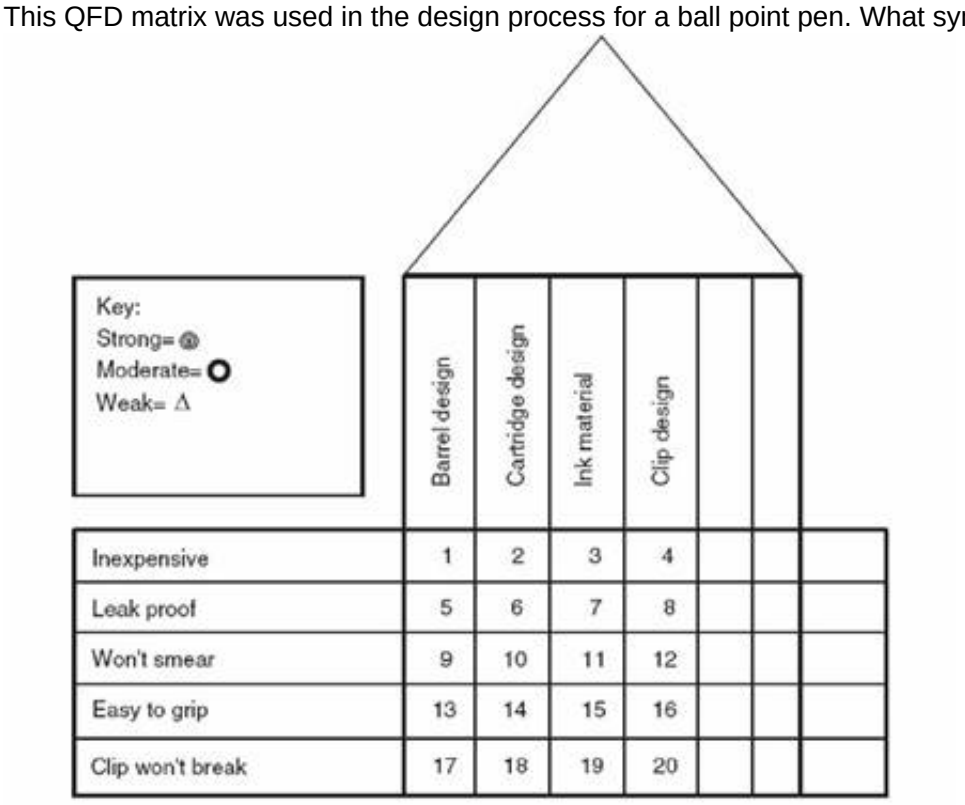


A.
B.
C.

A. none of the above

Answer: B

NEW QUESTION 170
- (Topic 2)
This QFD matrix was used in the design process for a ball point pen. What symbol is appropriate for the square labeled 5?



A.
B.
C.

A. none of the above

Answer: A

NEW QUESTION 175
- (Topic 2)
A set of data from a process has 8 readings per sample and 50 samples. The mean of the 50 sample means is 12.62. The mean of the 50 ranges is 0.18. Find the control limits for the xbar chart.

A. 12.55 and 12.69
B. 12.11 and 13.13
C. 12.54 and 12.70
D. none of the above

Answer: A

Explanation:

This formula is using control limit for the x bar chart

$$UCL_{\overline{X}} = \overline{\overline{X}} + A_2\overline{R}$$

= 12.62 + (0.373)(0.18)
= 12.62 + 0.06714
= 12.69

$$LCL_{\overline{X}} = \overline{\overline{X}} - A_2\overline{R}$$

=12.62 – (0.373)(0.18)
=12.62 – 0.06714
= 12.55
UCL is 12.69 and LCL is 12.55

n	A_2	n	A_2	n	A_2
2	1.880	7	0.419	12	0.266
3	1.023	8	0.373	13	0.249
4	0.729	9	0.337	14	0.235
5	0.577	10	0.308	15	0.223
6	0.483	11	0.285		

NEW QUESTION 180
- (Topic 2)

Calculate the interaction effect:

A. 20
B. 25
C. 30
D. 40
E. none of the above
F. Answer Pending

Answer: F

NEW QUESTION 181
- (Topic 2)
Find Cpk

A. 2.00
B. 0.56
C. 1.33
D. 0.44

Answer: D

NEW QUESTION 185
- (Topic 2)
In the theory of constraints the “subordinate” step refers to:

A. a listing of sub-processes
B. reducing the rate for some processes
C. the portion of the process flow chart that depends on the main flow
D. the less important product or service stream
E. none of the above

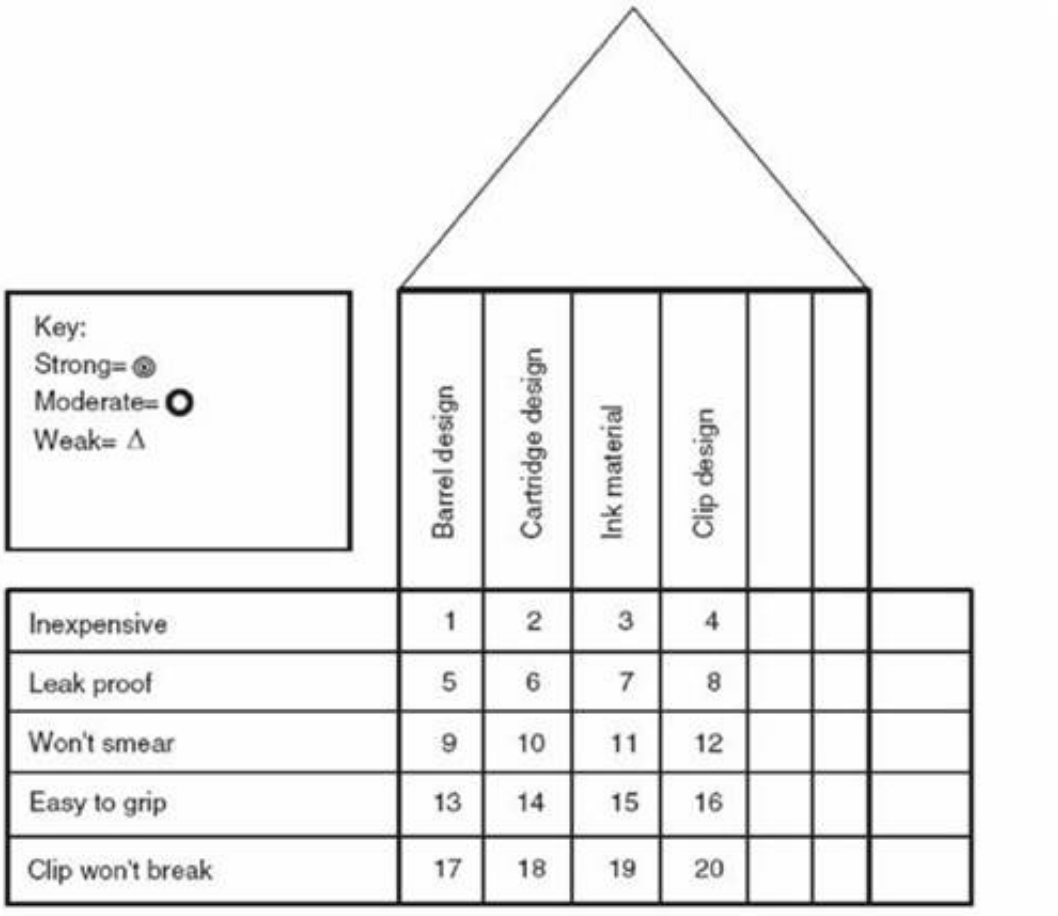
Answer: B

NEW QUESTION 189
- (Topic 2)
Dr. W. Edwards Deming:

A. lectured in Japan after World War II
B. was an author of several books in the US
C. lectured widely in the US
D. is considered an expert in the quality field
E. all of the above
F. none of the above

Answer: E

NEW QUESTION 193
- (Topic 2)
This QFD matrix was used in the design process for a ball point pen. What symbol is appropriate for the square labeled 8?



A.
B.

C.

A. none of the above

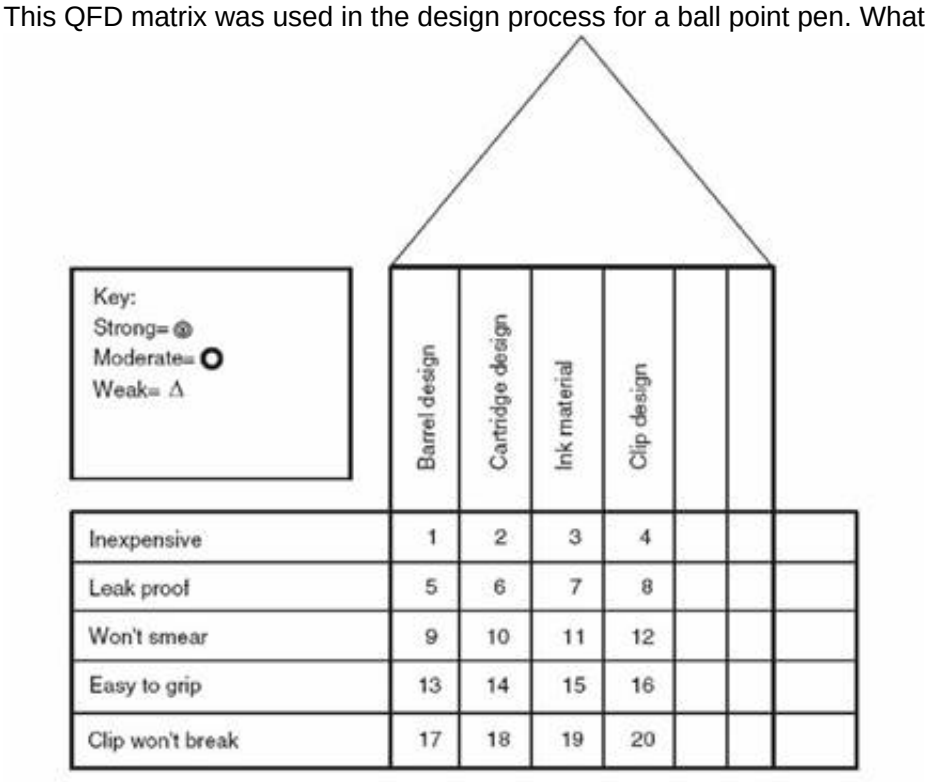
Answer: D

NEW QUESTION 194
- (Topic 2)
An indication of the experimental error is available because the design has:

A. multiple replications
B. multiple levels
C. multiple factors

Answer: A

NEW QUESTION 198
- (Topic 2)
This QFD matrix was used in the design process for a ball point pen. What symbol is appropriate for the square labeled 14?



A.
B.
C.

A. none of the above

Answer: D

NEW QUESTION 200
- (Topic 2)
As opposed to earlier emphases lean manufacturing tends to stress:

A. making value added activities more efficient
B. eliminating, simplifying or reducing non-value added activities

Answer: B

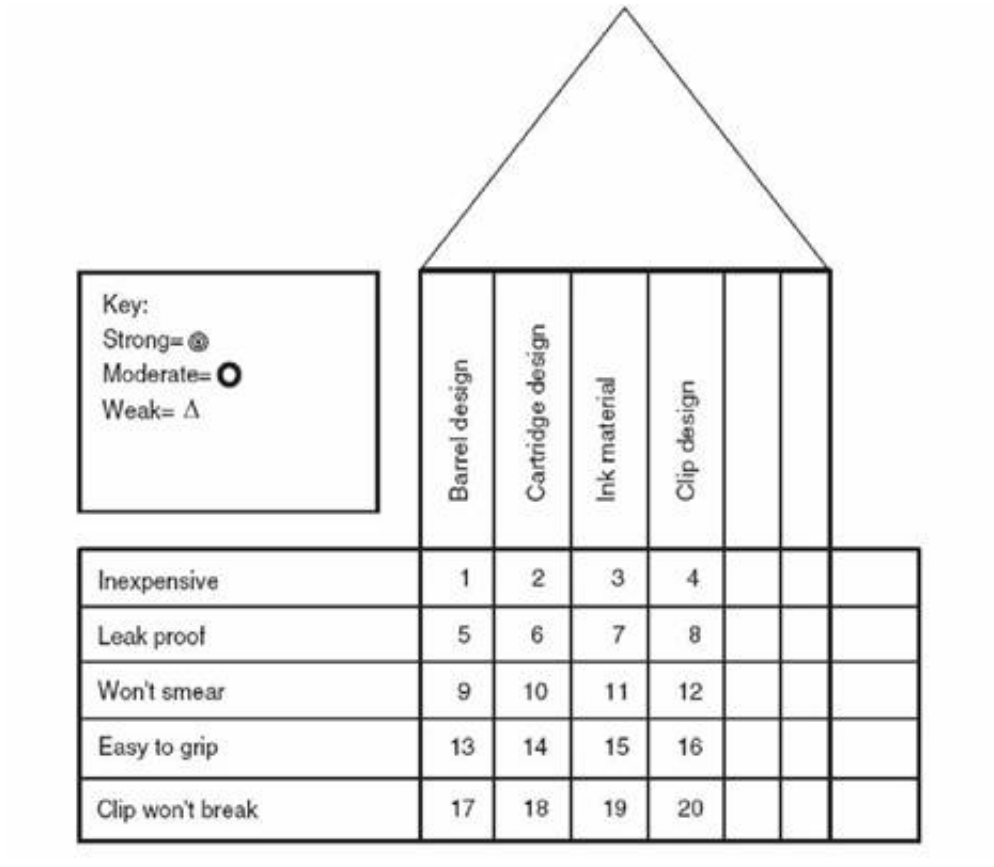
NEW QUESTION 205
- (Topic 2)
If = 0.5, what is the critical value?

A. 2.365
B. 2.306
C. 1.860
D. 1.895

Answer: D

Explanation:
See the F distribution critical values for P=0.05. The table is not available online.

NEW QUESTION 206
- (Topic 2)
This QFD matrix was used in the design process for a ball point pen. What symbol is appropriate for the square labeled 3?



A.
B.
C.

A. none of the above

Answer: B

NEW QUESTION 208
- (Topic 2)
A helpful time to use a Quality Function Deployment matrix is:

A. while planning for a new or redesigned process
B. while planning for new or redesigned parts
C. while planning for a new or redesigned product
D. all of the above
E. none of the above

Answer: D

NEW QUESTION 210
- (Topic 2)
An experiment is conducted by checking the effect that three different pressures have on the surface appearance of a product. Ten items are produced at each of the three pressures. The number of replications, factors and levels are:

A. 10, 3, 2
B. 10, 2, 3
C. 2, 3, 3
D. 10, 1, 3
E. 10, 3, 1

Answer: D

NEW QUESTION 213
- (Topic 2)
This experimental design is:

A. full factorial
B. half factorial
C. quarter factorial
D. none of the above

Answer: B

NEW QUESTION 218
- (Topic 2)
The test statistic is approximately:

A. 4.79
B. 6.71
C. 2.08
D. 5.44

Answer: A

NEW QUESTION 220
- (Topic 2)
Successful Six Sigma projects always:

A. use designed experiments
B. impact the bottom line of the enterprise
C. are completed in a short time frame
D. all of the above
E. none of the above

Answer: B

NEW QUESTION 223
- (Topic 2)
A frequent cause of system sub optimization is:

A. optimizing individual processes
B. failing to draw a system flow chart
C. using data with outliers
D. failing to consider the normal distribution

Answer: A

NEW QUESTION 224
- (Topic 2)
A process shows the following number of defectives. Each sample size for this process is 85.3 8 2 7 7 6 8 8 9 5
What control chart should be used?

A. x-bar and R
B. median
C. individual and moving range
D. p
E. np
F. c
G. u
H. none of the above

Answer: E

NEW QUESTION 227
- (Topic 2)
A team has been asked to reduce the occurrence of a particular defect. They begin by brainstorming all possible causes using a:

A. matrix diagram
B. cause and effect diagram
C. process decision program chart
D. affinity diagram
E. activity network diagram
F. tree diagram
G. prioritization matrix
H. matrix diagram
I. interrelationship digraph

Answer: B

NEW QUESTION 231
- (Topic 2)
A principle disadvantage of fractional factorial experimental designs is:

A. reduced cost
B. improved accuracy
C. confounding of effects
D. higher confidence level
E. reduced probability of type II errors

Answer: C

NEW QUESTION 232
- (Topic 2)
A newspaper article describes a high positive correlation between obesity and orange juice consumption among six-year-olds. Parents who restrict the use of orange juice for their children have:

A. made a type I error
B. made a type II error
C. misunderstood margin of error
D. confused correlation with causation

Answer: D

NEW QUESTION 237
- (Topic 2)
The mean of a Poisson distribution is 2.94. It's variance is:

A. Not enough information is given
B. 1.71
C. 8.64
D. 74.7
E. 1.31

Answer: C

Explanation:
The correct answer is C because the mean of poisson distribution is 2.94, hence the variance would be 8.64
U =
variance = 2

NEW QUESTION 241
- (Topic 2)
A team wants a technique for displaying the connection between various customer needs and various features on a product. They should use:

A. written and diagrammed work instructions
B. flow charts and process maps
C. cause and effect diagrams
D. Pareto chart
E. relationship matrix

Answer: E

NEW QUESTION 245
- (Topic 2)
Proposed Six Sigma projects that are not in some way linked to organizational goals:

A. will typically be short term
B. use statistical inference
C. have a high risk of failure
D. should not be approved
E. none of the above

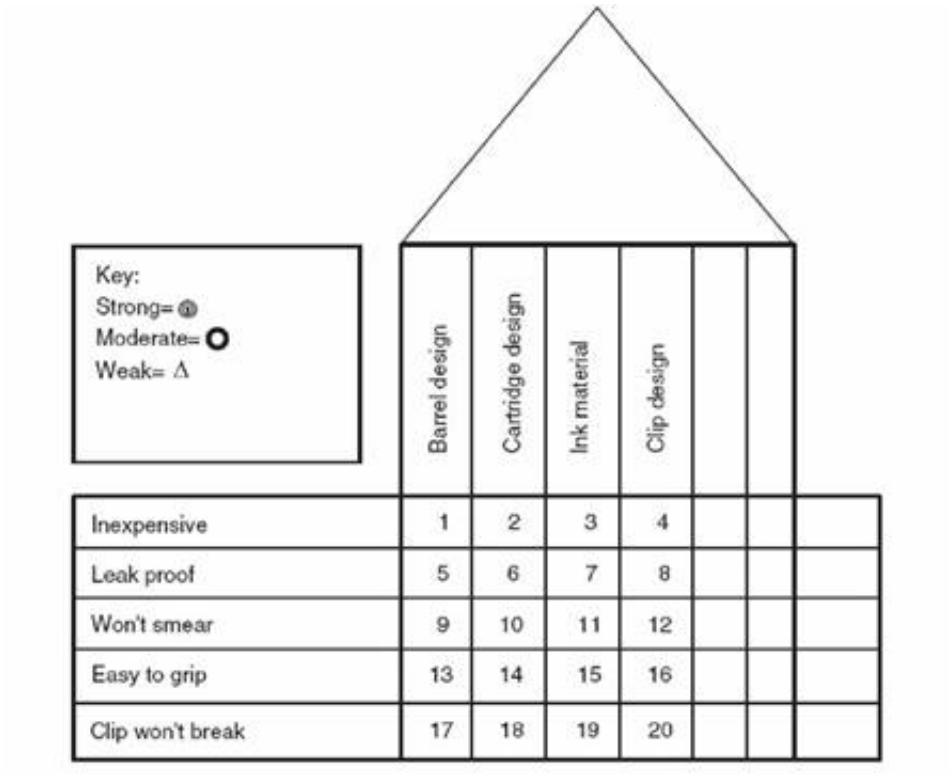
Answer: D

NEW QUESTION 250
- (Topic 2)
Find the value of m or b1:

A. 0.25
B. 0.63
C. 0.75
D. 1.22

Answer: C

NEW QUESTION 254
- (Topic 2)
This QFD matrix was used in the design process for a ball point pen. What symbol is appropriate for the square labeled 13?



A.
B.
C.

A. none of the above

Answer: B

NEW QUESTION 259
- (Topic 2)
An approach that would remove the contradiction identified in x.28 would be:

A. find an inexpensive way to apply multiple coats
B. find an inexpensive material that will provide an excellent finish with one coat.
C. all of the above
D. none of the above

Answer: C

NEW QUESTION 264
- (Topic 2)
A team has completed a brainstorming session that has generated a large number of ideas. The team needs to organize these ideas in natural groupings. Which tool is most appropriate?

A. matrix diagram
B. cause and effect diagram
C. process decision program chart
D. affinity diagram
E. activity network diagram
F. tree diagram
G. prioritization matrix
H. matrix diagram
I. interrelationship digraph

Answer: D

NEW QUESTION 265
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