



Question 7

Time left 0:23:02

Not yet answered

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Flag question

The sugar content of the syrup in canned peaches is normally distributed. A random sample of $n = 25$ cans yields a sample standard deviation of $s^2 = 23.04$ milligrams². Calculate a **99% two-sided** confidence interval for σ^2 .

- a. [12.87, 50.93]
- b. [14.05, 44.59]
- c. [12.14, 55.93]
- d. [4.8, 12.73]

هذا شو؟



The life in hours of a 75-watt light bulb is **known to be normally** distributed with $\sigma = 15$ hours. A random sample of 22 bulbs has a mean life of $X_{\text{Avg}} = 1500$ hours.

Construct a **95%** two-sided confidence interval on the mean life.

- a. [1193, 1206]
- b. [893, 906]
- c. [1006, 1021]
- d. [1493, 1506]

Time left 0:51:58

In health research, patients are tested for a gene that has been found to increase the risk for a disease. The probability that a person carries the gene is **0.2**.

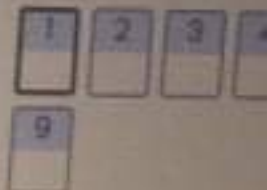
- i) What is the probability **three or more** people will have to be tested before **two** with the gene are detected?
- ii) How many people are expected to be tested before **two with the gene are detected?**

- a. i) 0.99
ii) 20
- b. i) 0.94
ii) 8
- c. i) 0.90
ii) 13.33
- d. i) 0.96
ii) 10

Clear my choice

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Quiz navigat



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Time left 0:06:33

Samples of er three suppliers are classified for conformance to air-quality specifications. The results from 100 samples are summarized as follows:

Let A denote the event that a sample is from supplier 1, and let B denote the event that a sample does not conform to specifications. Events A and B are:

		Conforms	
		Yes	No
Supplier	1	11	4
	2	20	5
	3	24	6
	Total	55	15

- a. Independent
- b. Dependent
- c. Mutually exclusive
- d. None of the above

For a normal population with **known variance** σ^2 , answer the following question:

What is the confidence level for the interval $X_{Avg} - 1.5\sigma/\sqrt{n} \leq \mu \leq X_{Avg} + 1.5\sigma/\sqrt{n}$

- a. 80%
- b. 87%
- c. 92%
- d. 98%

[Clear my choice](#)



[Finish attempt](#)

Time left 0:08:21

A juice beverage machine is adjusted to release a certain amount of syrup into a chamber where it is mixed with carbonated water. A random sample of 25 beverages was found to have a mean syrup content of \bar{X}_{Avg} 45ml and a standard deviation of $s = 0.5$ ml. Find a 95% CI on the mean volume of syrup dispensed.

- a. [39.8, 40.2]
- b. [44.8, 45.2]
- c. [49.8, 50.2]
- d. [29.8, 30.2]

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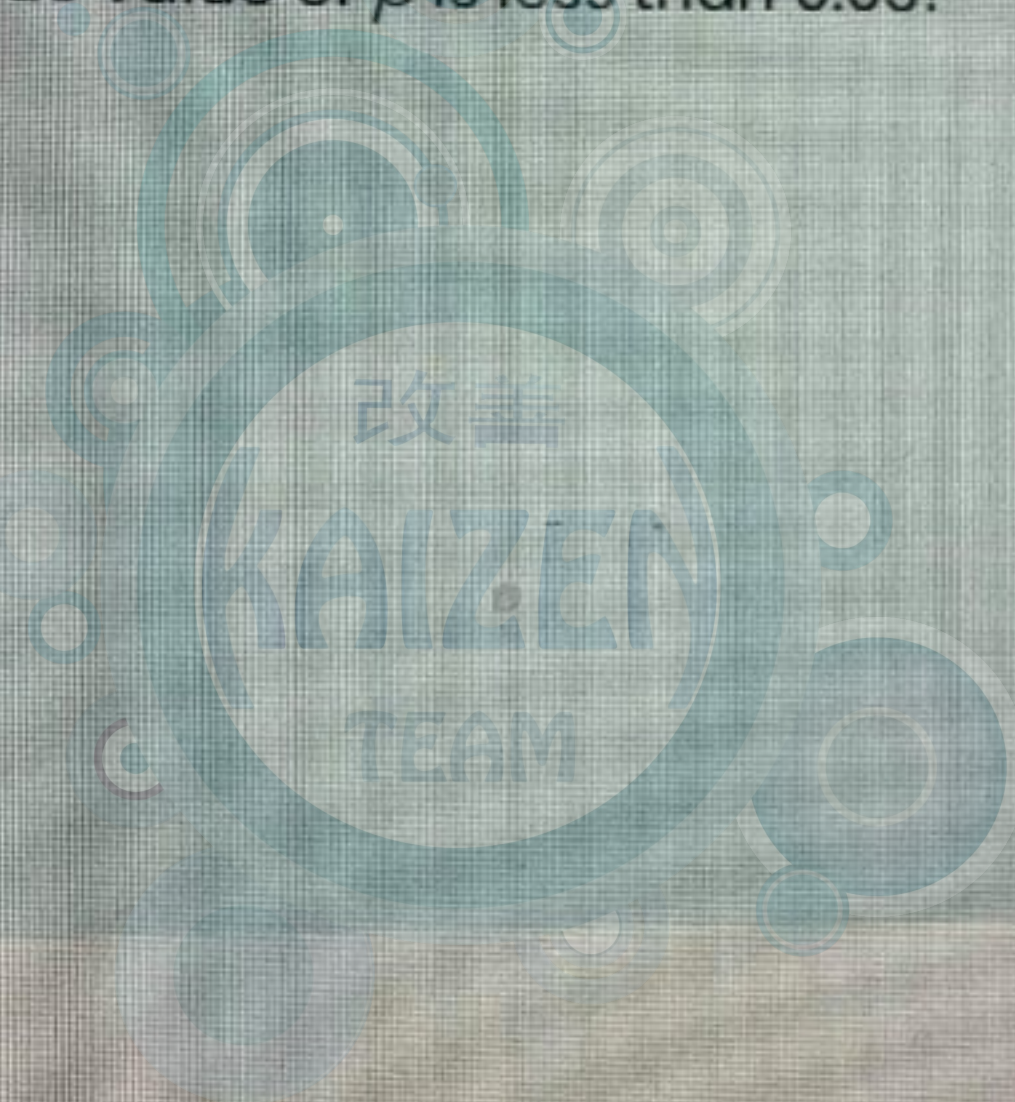
Time left 0:20:24


A juice beverage machine is adjusted to release a certain amount of syrup into a chamber where it is mixed with carbonated water. A random sample of 25 beverages was found to have a mean syrup content of X_{Avg} 45ml and a standard deviation of $s = 0.5$ ml. Find a 95% CI on the mean volume of syrup dispensed.

Time left 0:15:11

Of 2100 randomly selected cases of lung cancer, 650 resulted in death within 10 years. Using the point estimate of p obtained from the preliminary sample, what sample size is needed to be 95% confident that the error in estimating the true value of p is less than 0.03?

- a. 1008
- b. 961
- c. 1048
- d. 913



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Time left 0:21:09

The life in hours of a 75-watt light bulb is known to be normally distributed with $\sigma = 15$ hours. A random sample of 22 bulbs has a mean life of $X_{\text{Avg}} = 900$ hours. Construct a 95% two-sided confidence interval on the mean life.

- a. [893, 906]
- b. [1493, 1506]
- c. [1193, 1206]
- d. [1006, 1021]

For a normal population with **known variance σ^2** , answer the following question:

What is the confidence level for the interval $X_{Avg} - 1.75\sigma/\sqrt{n} \leq \mu \leq X_{Avg} + 1.75\sigma/\sqrt{n}$

- a. 92%
- b. 80%
- c. 87%
- d. 98%

Samples of emissions from three suppliers are classified for conformance to air-quality specifications. The results from 100 samples are summarized as follows:

Let A denote the event that a sample is from supplier 1, and let B denote the event that a sample does not conform to specifications. Events A and B are:

		Conforms		
		Yes	No	Total
Supplier	1	11	4	15
	2	20	5	25
	3	24	6	30
	Total	55	15	70

- a. Independent
- b. Dependent
- c. Mutually exclusive
- d. None of the above

Question 6

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question

In health research, patients are tested for a gene that has been found to increase the risk for a disease. The probability that a person carries the gene is **0.2**.

- i) What is the probability **three or more** people will have to be tested before **two** with the gene are detected?
- ii) How many people are expected to be tested before **two** with the gene are detected?

- a. i) 0.94
ii) 8
- b. i) 0.99
ii) 20
- c. i) 0.96
ii) 10
- d. i) 0.90
ii) 13.33

A synthetic fiber used in manufacturing carpet has tensile strength that is normally distributed with a mean of 500 and a standard deviation of 25. Find the probability that a random sample of $n = 20$ fiber specimens will have a sample mean tensile strength that exceeds 505.

- a. 0.26



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Time left 0:37:11

In health research, patients are tested for a gene that has been found to increase the risk for a disease. The probability that a person carries the gene is **0.1**.

- i) What is the probability **three or more** people will have to be tested before **two** with the gene are detected?
- ii) How many people are expected to be tested before **two** with the gene are detected?

- a. i) 0.99
ii) 20
- b. i) 0.96
ii) 10
- c. i) 0.90
ii) 13.33
- d. i) 0.94
ii) 8

Clear my choice

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A synthetic fiber used in manufacturing carpet has tensile strength that is **normally distributed** with a mean of 500 and a standard deviation of 25. Find the probability that a random sample of $n = 20$ fiber specimens will have a sample mean tensile strength that exceeds 505.

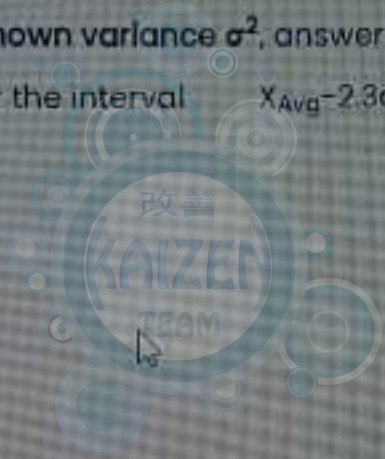
- a. 0.14
- b. 0.31
- c. 0.18
- d. 0.26

Time left 0:25:09

For a normal population with known variance σ^2 , answer the following question:

What is the confidence level for the interval $\bar{X}_{AVG} - 2.3\sigma/\sqrt{n} \leq \mu \leq \bar{X}_{AVG} + 2.3\sigma/\sqrt{n}$

- a. 87%
- b. 92%
- c. 80%
- d. 98%

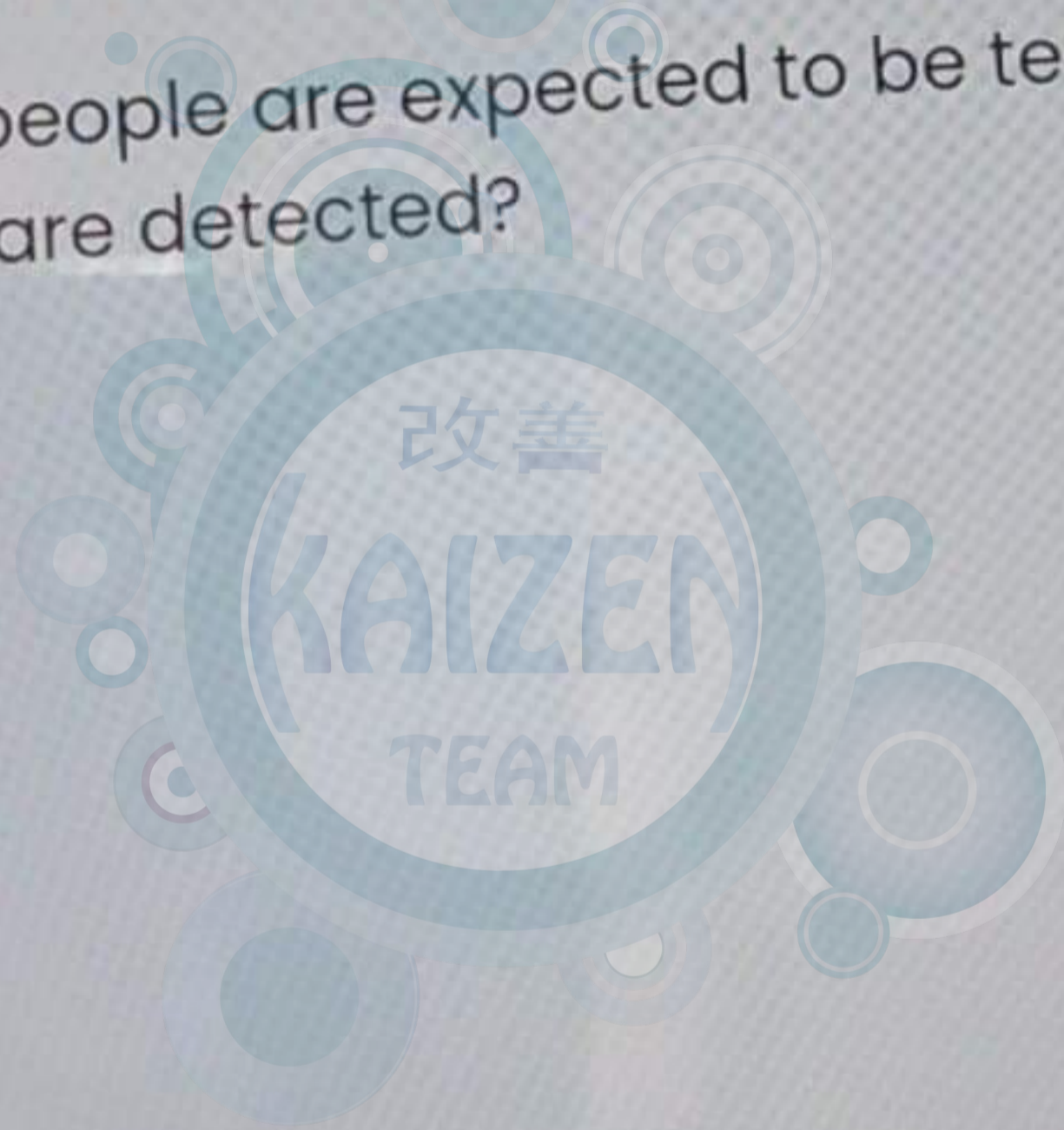


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In health research, patients are tested for a gene that has been found to increase the risk for a disease. The probability that a person carries the gene is **0.1**.

- i) What is the probability **three or more** people will have to be tested before **two** with the gene are detected?
- ii) How many people are expected to be tested before **two** with the gene are detected?

- a. i) 0.99
ii) 20
- b. i) 0.94
ii) 8
- c. i) 0.96
ii) 10
- d. i) 0.90
ii) 13.33



Time left 0:35:10

Of 2100 randomly selected cases of lung cancer, 650 resulted in death within 10 years. Using the point estimate of p obtained from the preliminary sample, what sample size is needed to be 95% confident that the error in estimating the true value of p is less than 0.03?

a. 1008

b. 1048

Time left 0:30:26

Question 2

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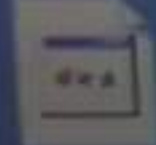
A synthetic fiber used in manufacturing carpet has tensile strength that is **normally distributed** with a mean of 500 and a standard deviation of 25. Find the probability that a random sample of $n = 29$ fiber specimens will have a sample mean tensile strength that exceeds 505.

- a. 0.26
- b. 0.31
- c. 0.18
- d. 0.14

[Clear my choice](#)[Next page](#)

The sugar content of the syrup in canned peaches is normally distributed. A random sample of $n = 25$ cans yields a sample standard deviation of $s^2 = 23.04$ milligrams². Calculate a **98% two-sided** confidence interval for σ^2 .

- a. [12.14, 55.93]
- b. [12.87, 50.93]
- c. [14.05, 44.59]
- d. [4.8, 12.73]

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Samples of emissions from three suppliers are classified for conformance to air-quality specifications. The results from 100 samples are summarized as follows:

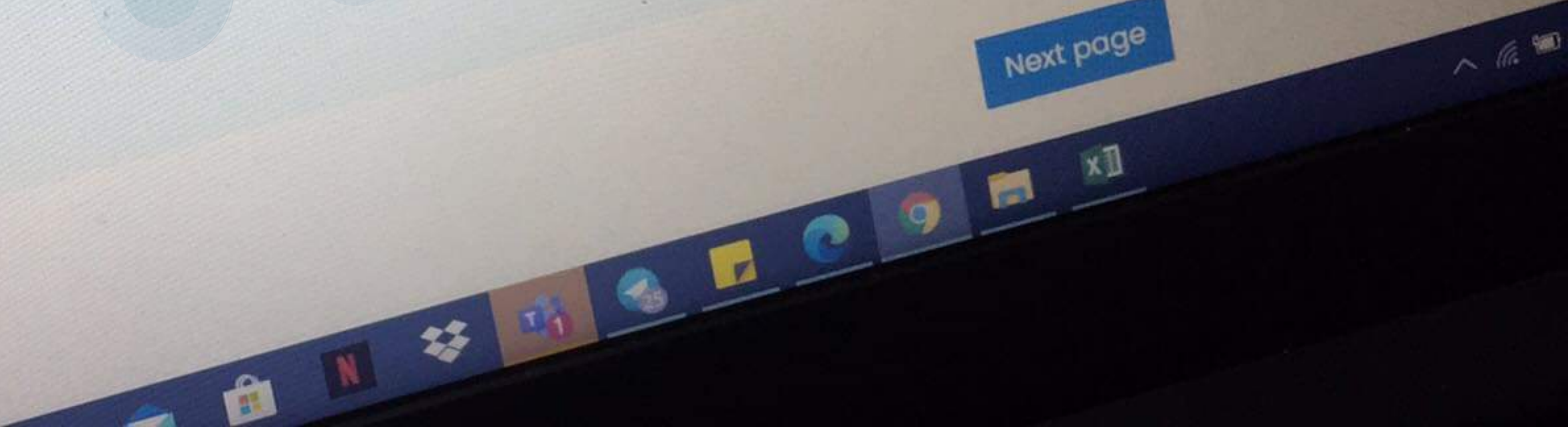
Let A denote the event that a sample is from supplier 1, and let B denote the event that a sample does not conform to specifications. Events A and B are:

Supplier	Conforms		Total
	Yes	No	
1	11	4	15
2	20	5	25
3	24	6	30
Total	55	15	70

- a. Independent
- b. Dependent
- c. Mutually exclusive
- d. None of the above



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In health research, patients are tested for a gene that has been found to increase the risk for a disease. The probability that a person carries the gene is **0.25**.

- i) What is the probability **three or more** people will have to be tested before **two** with the gene are detected?
- ii) How many people are expected to be tested before **two** with the gene are detected?

a. i) 0.94

ii) 8

b. i) 0.99

ii) 20

c. i) 0.90

ii) 13.33

d. i) 0.96

ii) 10

Clear my choice

Time left 0:33:14

Question 4

Not yet answered

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Flag question

A synthetic fiber used in manufacturing carpet has tensile strength that is normally distributed with a mean of 500 and a standard deviation of 25. Find the probability that a random sample of $n = 10$ fiber specimens will have a sample mean tensile strength that exceeds 505.

- a. 0.26
- b. 0.18
- c. 0.14
- d. 0.31

[Clear my choice](#)

Quiz navig

1 2 3

8

[Finish attempt](#)[Next page](#)

Suppose that X has a Weibull distribution with $\beta = 0.2$ and $\delta = 50$ hours. Determine the mean of X .

- a. 8400
- b. 6000
- c. 7200
- d. 160



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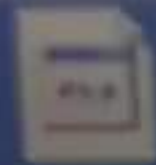
Suppose that X has a Weibull distribution with $\beta = 0.2$ and $\delta = 50$ hours. Determine the mean of X .

- a. 160
- b. 6000
- c. 8400
- d. 7200

[Clear my choice](#)



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Question 3

Not yet answered

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Flag question

For a normal population with known variance σ^2 , answer the following question:

What is the confidence level for the interval

$$\bar{X}_{\text{Avg}} \pm 2.3\sigma/\sqrt{n}$$

$$\bar{X}_{\text{Avg}} \pm 2.3\sigma/\sqrt{n}$$

- a. 87%
- b. 92%
- c. 80%
- d. 98%

[Clear my choice](#)

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A synthetic fiber used in manufacturing carpet has tensile strength that is normally distributed with a mean of 500 and a standard deviation of 25. Find the probability that a random sample of $n = 20$ fiber specimens will have a sample mean tensile strength that exceeds 505.

- a. 0.26
- b. 0.31

My courses

0936251 / جميع الشعب

General

Final Fall 2020

Of 1900 randomly selected cases of lung cancer, 650 resulted in death within 10 years. If the point estimate of p obtained from the preliminary sample, what sample size would be 95% confident that the error in estimating the true value of p is less than 0.03?

- a. 961
- b. 1008
- c. 1048
- d. 913

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