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<u>Course</u> > <u>Final</u> > <u>Final E</u>... → Final E...

Final Exam

Adapt 4

1/1 point (graded)

You recorded the number of hours that each of 1,000 light bulbs lasted before burning out. The data type of the hours variable is:

O Nomin	al
Ordina	I
O Interva	I
● Ratio ✔	
Submit	You have used 1 of 1 attempt

Adapt 17

1/1 point (graded)

Using the data in Module 1_Quiz Data_Stocks.xlsx, answer the following question.

Which stock exhibits the most skewness?

○ 3M

● GE ✔	
O IBM	
Intel	
Submit	You have used 1 of 1 attempt
How many o	
0 1	
0 4	
● 8 ✔	
0 12	
Submit	You have used 1 of 1 attempt
1 Answer	s are displayed within the problem

0/1 point (graded)

The data in Module 1_Quiz Data_BoxPlot.xlsx are monthly returns on 5 stocks. Use this data to create a box plot and then answer the following question.

Which stock exhibits the least variability? Base your response on the visualization.

Dell INTC MSFT NT PFE You have used 1 of 1 attempt Submit **1** Answers are displayed within the problem Adapt 62 0/1 point (graded) You are analyzing a spreadsheet showing the relationship between genre of movie (e.g., comedy, horror, drama, etc.), rating (e.g., G, PG, R), and revenue. You want to graphically display this data. Which two graphics would work best for this purpose? Histogram Boxplot Pareto chart ✓ Sunburst chart ✓ ✓ Tree map ✓ You have used 1 of 1 attempt

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1 Answers are displayed within the problem

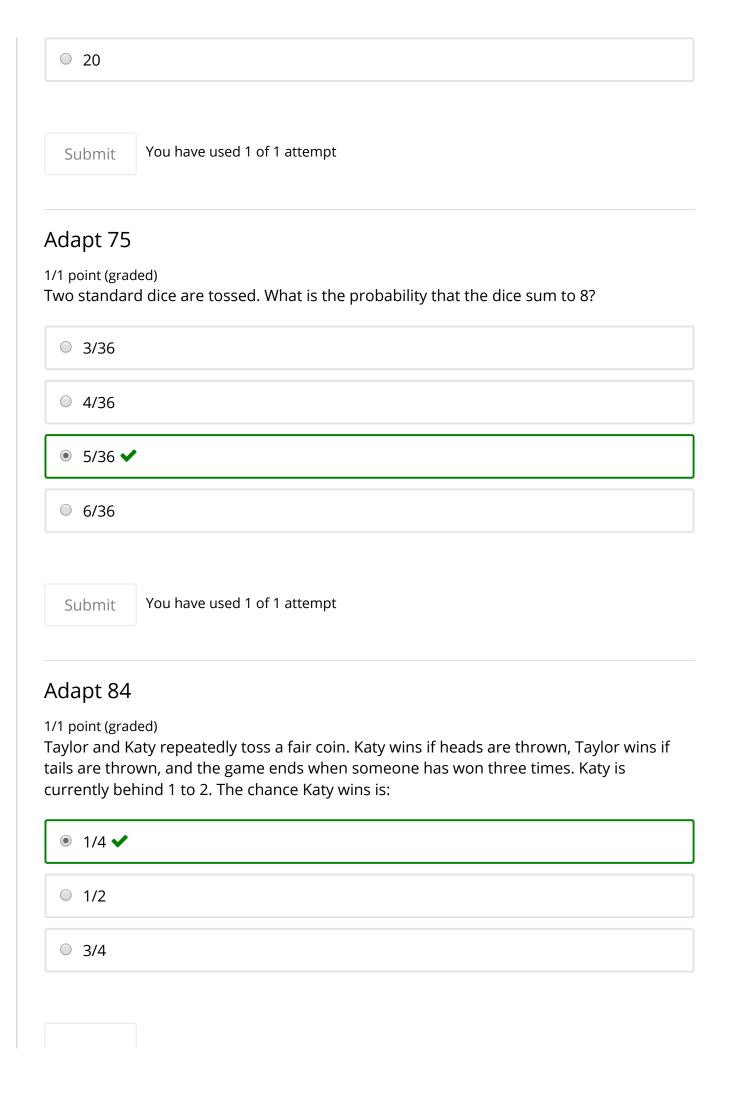
Adapt 65

1/1 point (graded)

Using the data in Module 1_Quiz Data_Pareto.xlsx, create a Pareto Chart illustrating the complaints that your organization has received over the last 6 months, and then answer the following question.

Based on the Pareto chart, what is the cumulative frequency of the complaints that you would recommend that your organization focus on to drive increased customer satisfaction?

© 37%
● 70% ✔
O 79%
O 84%
Submit You have used 1 of 1 attempt
Adapt 72 1/1 point (graded) If we consider the toss of four coins as an experiment, how many equally likely outcomes does the sample space have?
O 4
⊗ 8
● 16



1/1 point (graded)

You have a group of 12 products. You know that 4 are defective. If 3 are drawn at random without replacement, what is the probability that none of them are defective?

0 .25
· .33
○ .38
· .42
Submit You have used 1 of 1 attempt

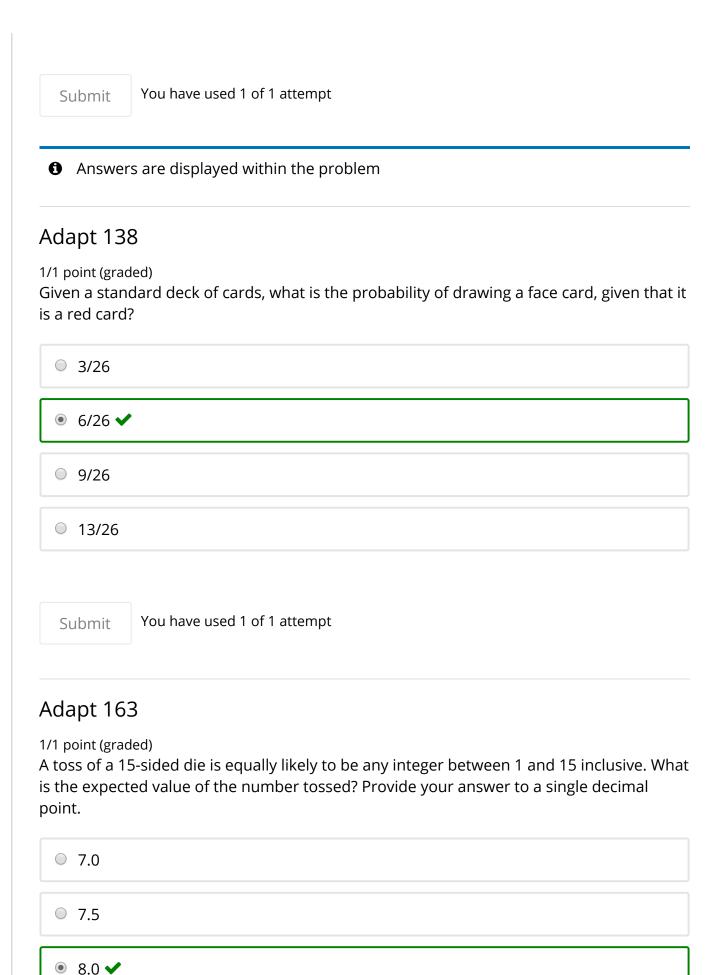
Adapt 121

0/1 point (graded)

Ninety (90%) of an insurance company's policyholders are low risk and 10% are high risk. Assume that each policyholder has either 0 or 1 accident in a year. Assume 75% of high risk policyholders have an accident in a year and 10% of low risk policyholders have an accident in a year.

If we randomly pull a policyholder's accident report, what is the chance the policyholder was low risk?

0.33			
0.45			
● 0.55 ✔			
0.66			



Submit

You have used 1 of 1 attempt

Adapt 178

1/1 point (graded)

Based on historical results, a pharmaceutical company has determined that if a new cholesterol-reducing drug is manufactured (introduced to the market), the following probability distribution will describe this drug's contribution to the company's profits during the next six months.

Profit	Probability of Profit
Contribution	Contribution
-\$40,000	.40
\$60,000	.10
\$100,000	.50

Based on the information given above, how much would you expect the new drug to contribute to the profit of the company?

\$40,000 ✓	
\$50,000	
\$56,000	
\$60,000	

Submit

You have used 1 of 1 attempt

Adapt 187

1/1 point (graded)

Suppose 4% of all cell phone chips are defective. We randomly select 100 of the 50,000 cell phone chips produced in a day. What is the chance that 2 defective chips will be found?
0.004
0.04
0.08
● 0.14
Submit You have used 1 of 1 attempt
Adapt 196 0/1 point (graded) The Securities and Exchange Commission has determined that the number of companies listed in NYSE declaring bankruptcy is approximately a Poisson distribution with a mean of 2.6 per month. What is the probability of more than one bankruptcy occurring during the next month?
○ .1931
O .2674
O .4816
● .7326
Submit You have used 1 of 1 attempt
Answers are displayed within the problem

1/1 point (graded)

Assume the average weight of a loaf of bread is a normal random variable with mean = 1 pound and standard deviation .05 pounds. What fraction of the loaves weigh between 0.98 and 1.04 pounds?

● 0.44 ✓	
0.46	
0.48	
0.50	
Submit	You have used 1 of 1 attempt

Adapt 223

1/1 point (graded)

If you assume data follows a normal distribution, what is the corresponding percentile for a Z-score of -.5?



Submit You have used 1 of 1 attempt

0.004

0.002

0.001

0/1 point (graded)

You are trying to determine the proportion of all cars produced today that have defective transmissions. For each four-door car produced today, you will flip a coin; if it comes up heads, you will result in a test of the transmission.

Is this sampling plan biased? If so, which sampling bias is exhibited?

The sampling plan is not biased.
Response bias
Selection bias ✓
Publication bias
Submit You have used 1 of 1 attempt
Answers are displayed within the problem
Adapt 246 0/1 point (graded) One 16-ounce bottle of an energy drink has an average of 400 mg of caffeine with a standard deviation of 20 mg. What is the probability that the average caffeine in a sample of 25 bottles is no more than 390 milligrams?
● 0.006

1 Answers are displayed within the problem

Adapt 252

0/1 point (graded)

A drawer contains 4 capsules numbered 2, 3, 5, and 8. A sample of size 3 is drawn with replacement. What is the standard deviation of x-bar?

0.59

0 1.33

1.95 X

2.14

Submit

You have used 1 of 1 attempt

Adapt 259

0/1 point (graded)

A company with 40,00 employees wants to estimate the commuting time it takes an employee to get to work. They survey 200 employees and find a sample mean of 35 minutes with a sample standard deviation of 10 minutes.

The company is 99% sure that that the average commuting time is within which of the following ranges?

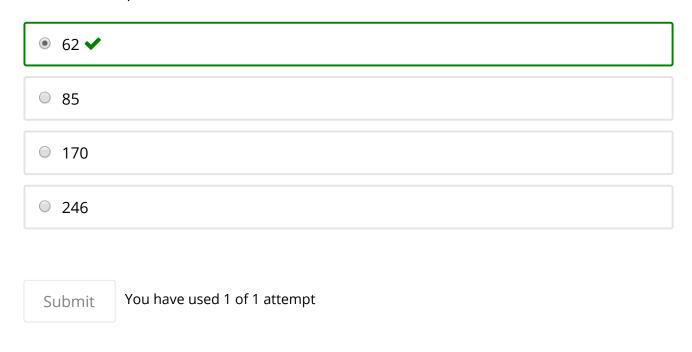
33.83 to 36.16 minutes

33.61 to 36.39 minutes X

33.18 to 36.82 minutes

34.90 to 35.10 minutes
 Submit You have used 1 of 1 attempt
 Adapt 273
 1/1 point (graded)
 We are trying to estimate the average salary of employees at a company. Assume the standard deviation of employee salaries is \$20,000, and we want to be 95% sure our estimate is accurate within \$5,000.

What size sample is needed?



Adapt 282

0/1 point (graded)

A company with 400 employees wants to estimate the average commuting time for its employees. They believe the standard deviation of the commuting time of employees is 30 minutes.

If they want to be 95% confident that there estimate of mean commuting time is accurate within 5 minutes, what sample size is needed? Apply the finite correction factor to obtain your answer.

O 103

• 110 ×	
0 120	
0 138	
Submit	You have used 1 of 1 attempt

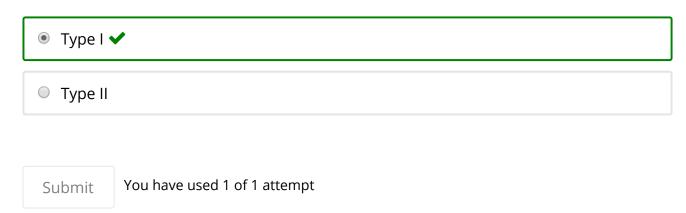
1/1 point (graded)

Let μ = average time needed for an express mail company to deliver a package. Suppose:

HO: μ = 2 days

Ha: $\mu > 2$ days

If you conclude that average time to deliver a package is greater than two days when it's actually two days, you have committed which type of error?



Adapt 311

1/1 point (graded)

In the past, it has taken an express mail company an average of 2 days to deliver packages. After hiring a consulting firm, they want to know if delivery has improved. Let μ = average number of days needed to deliver a package after hiring a consulting firm. The company wants to test the following:

H_o : $\mu >= 2$ against H_a : $\mu < 2$.

A sample of 100 packages yields xbar = 1.8 and s = 1.5. For α = 0.05, what do you conclude?

- We fail to reject Ho, because the p-value is 0.046.
- We fail to reject Ho, because the p-value is 0.091.
- We reject Ho, because the p-value is 0.046.
- We reject Ho, because the p-value is 0.091.

Submit

You have used 1 of 1 attempt

Adapt 344

1/1 point (graded)

A jar of applesauce is supposed to weigh 18 ounces. The company is trying to determine if its applesauce is overweight. Let μ = average ounces in a jar of applesauce. You want to test the following:

H_o : $\mu <= 18$ ounces against H_a : $\mu > 18$

A random sample of 16 jars yields \bar{x} = 18.2 ounces and s = 0.6 ounces. For α =0.05, what do you conclude? Assume the relevant population follows a normal random variable.

- ullet We fail to reject Ho, meaning that the jars are NOT overweight. \checkmark
- We fail to reject Ho, meaning that the jars are overweight.
- We reject Ho, meaning that that the jars are NOT overweight.
- We reject Ho, meaning that the jars are overweight.

0/1 point (graded)

Let p = fraction of shots taken from right side of the court when the rebound is grabbed on the right side of the court. Of 110 missed shots from the right side of the court, 65 were rebounded on the right side of the court.

For $\alpha = 0.05$, Ho: p = 0.5, and a two-tailed test, what would you conclude?

- We fail to reject Ho, because the p-value is 0.977.
- We fail to reject Ho, because the p-value is 0.07.
- We reject Ho, because the p-value is 0.035. 🗙
- We reject Ho, because the p-value is 0.017.

Submit

You have used 1 of 1 attempt

Adapt 383

1/1 point (graded)

The Module 5_Quiz Data_High School.xlsx spreadsheet contains the income of randomly selected families whose students attend Odessa and Dylan High Schools.

For α = 0.05, what would you conclude about the variances of family incomes at the two schools? Assume family incomes are normally distributed at each school.

- The variances are equal.
- The variances are NOT equal.

Submit

You have used 1 of 1 attempt

0/1 point (graded)

The Module 5_Quiz Data_Process.xlsx spreadsheet contains the amount (in pounds) of a drug produced for 100 days using Process A and the amount of a drug (in pounds) produced using Process B on a different set of 100 days. You want to test Ho: mean pounds produced in a day with Process A = mean pounds produced in a day with Process B against Ha: mean pounds produced in a day with Process B.

For α = 0.05, what would you conclude?

We reject Ho, because the p-value is 0.03	.03.
---	------

• We reject Ho, because the p-value is 0.05.

We fail to reject Ho, because the p-value is 0.33. X

We fail to reject Ho, because the p-value is 0.67.

Submit

You have used 1 of 1 attempt

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