1 Student = One Example  
  
Condition = Should not get match with other student

1. Akash Todkar

A Little League baseball coach wants to know if his team is representative of other teams in scoring runs. Nationally, the average number of runs scored by a Little League team in a game is 5.7. He chooses five games at random in which his team scored 5 *,* 9, 4, 11, and 8 runs. Is it likely that his team's scores could have come from the national distribution? Assume an alpha level of 0.05.

1. Shubhangi Dighe

imagine a company wants to test the claim that their batteries last more than 40 hours. Using a simple random sample of 15 batteries yielded a mean of 44.9 hours, with a standard deviation of 8.9 hours. Test this claim using a significance level of 0.05.

1. Suvarna Nimonkar

We have the potato yield from 12 different farms. We know that the standard potato yield for the given variety is µ=20.

x = [21.5, 24.5, 18.5, 17.2, 14.5, 23.2, 22.1, 20.5, 19.4, 18.1, 24.1, 18.5]

Test if the potato yield from these farms is significantly better than the standard yield.

1. Vidya Kothavale

Many doctors recommend having a total cholesterol level below 200 mg/dl. We will test to see if the 1952 population from which the Dixon and Massey sample was gathered is statistically differenverage, from this recommended level

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5)Pansare Komal

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6) Arjun Walunj

A manufacturer claims that the thickness of the spearmint gum it produces is 7.5 one-hundredths of an inch. A quality control specialist regularly checks this claim. On one production run, he took a random sample of *n* = 10 pieces of gum and measured their thickness. He obtained:

| 7.65 | 7.60 | 7.65 | 7.70 | 7.55 |
| --- | --- | --- | --- | --- |
| 7.55 | 7.40 | 7.40 | 7.50 | 7.50 |

7) Manali More

Our school is worried about students that the students do not attend Yoga lectures. As of now students attend only 2.7 lectures. School board has decided to make students sign the undertaking form saying that they will attend 5 lectures in the academic year.

Number of attended lectures : [2, 3, 4, 1, 3, 3]

8) shivam shastri

A professor wants to know if her introductory statistics class has a good grasp of basic math. Six students are chosen at random from the class and given a math proficiency test. The professor wants the class to be able to score above 70 on the test. The six students get scores of 62, 92, 75, 68, 83, and 95. Can the professor have 90 percent confidence that the mean score for the class on the test would be above 70?

9) Suraj Bawane

a company wants to test the claim that their batteries last more than 40 hours. Using a simple random sample of 15 batteries yielded a mean of 44.9 hours, with a standard deviation of 8.9 hours. Test this claim using a significance level of 0.05.

10 ) Abhishek Ambi

In the population, the average IQ is 100. A team of scientists wants to test a new medication to see if it has either a positive or negative effect on intelligence, or no effect at all. A sample of 30 participants who have taken the medication has a mean of 140 with a standard deviation of 20. Did the medication affect intelligence?

11) Suraj

A random sample of 10 boys had the following IQ

70, 120, 110, 101, 88, 83, 95, 98, 107, 100

Do this data support the assumption of population mean IQ of 100?

12) Suraj Bawane

At a certain company, the mean starting salary for business majors is $42,000 with a standard deviation of $5000. A random sample of 36 business majors is selected. What is the probability that the mean starting salary for the sample is between $41,000 and $43,000?

13)Sable Digambar

Imagine we have collected a random sample of 31 energy bars from a number of different stores to represent the population of energy bars available to the general consumer. The labels on the bars claim that each bar contains 20 grams of protein.

Energy Bar - Grams of Protein : 20.70, 27.46, 22.15, 19.85, 21.29, 24.75, 20.75, 22.91, 25.34, 20.33, 21.54, 21.08, 22.14, 19.56, 21.10, 18.04, 24.12, 19.95, 19.72, 18.28, 16.26, 17.46, 20.53, 22.12, 25.06, 22.44, 19.08, 19.88, 21.39, 22.33, 25.79

If you look at the table above, you see that some bars have less than 20 grams of protein. Other bars have more. You might think that the data support the idea that the labels are correct. Others might disagree. The statistical test provides a sound method to make a decision, so that everyone makes the same decision on the same set of data values.