

1. The average height and standard deviation of a product is 64 and 2.5 inches respectively in a sample size of 100. Estimate the average height of total production at 95% confidence.
2. The average weight of a product is 20.5 kg with a standard deviation of 5.3 kg in a sample size of 50. Estimate the average weight of the total production at 95% confidence.
3. A researcher has done a study to examine the usage of internet by school children. Selecting a sample size of 50 students, the study was carried out. Results indicated 11.5 average usage hours with a standard deviation of 3.5 hours. Estimate the average usage hours of the school children at 95% confidence.
4. If the selected size of the sample is 20 students, estimate the average usage hours of the school children at 95% confidence.
5. Average daily income of a sample of small businesses is Rs.15, 000. It is expected to estimate the average daily income of small businesses in general at 95% confidence with a margin of error 4. The standard deviation of the income is Rs.50. Find the size of the sample.
6. Average and standard deviation of running distance in a sample of motor vehicles per hour is 35 and 5 kilometers respectively. It is expected to estimate the average running distance of motor vehicles at 95% confidence with a margin of error 1.225. Find the size of the motor vehicle sample.
7. The average income of a sample of workers per hour is Rs.25 with a standard deviation of Rs.2. The estimated average income interval of the workers per hour at 95% confidence is between 24.51 and 25.49. Find the size of the sample.
8. The number of defective sheets of thirty paper packets has been provided below. 14,15,13,14,15,16,17,15,14,12,13,15,18,18,19,17,14,15,16,14,12,15,17,15,18,19,19, 12,16,15. Estimate the average number of defective sheets in the total paper packet production at 5% significance.

9. There was a study to estimate the difference of weight between the two products produced by two companies. Following information is provided for the two products.

	Company 1	Company 2
Average weight	60.1Kg	54.1Kg
Standard deviation	2.2Kg	2.3Kg
Sample size	100	81

Estimate the difference of average weight between the two products produced by the two companies at 95% confidence.

10. If the selected samples from both of above companies are 10 and 15 respectively, estimate the difference again.

11. Following information provides the data pertaining to electric bulbs burning hours of 3 companies.

Company	A	B	C
Average burning hours	1200	1300	1250
Standard deviation	20	32	28
Sample size	121	100	144

Estimate the difference of electric bulbs burning hours between 3 companies at 95% confidence.

12. There are 118 male students in a sample size of 300 students selected from a school. Estimate the proportion of male students in the school at 95% confidence.

13. There are 290 good items in a sample size of 300 items produced by a company. Estimate the proportion of good items in the total production at 95% confidence.

14. When a sample size of 2000 workers is analyzed, there are one thousand two hundred workers who earn less than Rs.1000 per day. Estimate the proportion of the total workers who earn less than Rs.1000 per day at 99% confidence.

15. When a sample of students is analyzed, 60% is following professional courses. If the expected margin of error is 0.03 at 95% confidence, find the size of the sample of students.
16. A producer needs to test the difference between the qualities of his two products. When a sample size of 100 items from product 1 is tested; the level of quality is 92%. Sample size of 150 items from product 2 is tested; the level of quality is 90%. Estimate the difference between the qualities of two products at 95% level of confidence.
17. If the selected samples from both of above products are 10 and 15 respectively, estimate the difference again.