1. A random sample of n = 120 products taken from the manufacturing process showed a mean average weight of 8756 grams with a standard deviation of 450 grams. Find a 95% confidence interval for the population average 

= 8756 1.96 = 8756 80.52 grams

8675.48 8836.52 grams

1. A random sample of *n* = 120 products taken from the manufacturing process showed a mean average weight of 8756 grams with a standard deviation of 450 grams. Find a 99% confidence interval for the population average

= 8756 2.58 = 8756 105.98 grams

8650.02 8861.98 grams

1. Of a random sample of *n* = 150 employees, 86 of the employees said that they had studied history at university. Estimate the proportion of employees who studied history with a 95% confidence interval.

= = 0.57 0.08

0.49 < p < 0.65

1. Of a random sample of *n* = 300 customers, 197 said that they had studied a very positive opinion of their customer service. Estimate the proportion of customers who had this opinion at the 98% confidence level.

= = 0.66 0.06

0.60 < p < 0.72

1. Men and women were surveyed about how many steps they walk per day based on Fit Bit readings

Compare the average daily steps of dairy products of men and women using a 95% confidence interval.

Are the means statistically different?

(1 - 2) 1.96 = (9800-11400) 1.96 = -1600 122.88

-1722.88 < 1-2 < -1477.12

There is a difference in the average daily steps of dairy products for men and women since the confidence interval does not contain the value 1-2=0.

1. Compare the proportion of male and female survey respondents who said that they had play on an organized hockey on the weekend Are the proportions who play hockey different by gender or the same at a 95% confidence interval

1 - 2) 1.96 = ( - ) 1.96 = -0.06 0.06

-0.12 < 1-2 < 0

The proportions who play hockey are different by gender since the confidence interval does not contain the value 1 - 2=0.