Ex1

The sample mean and standard deviation for the fill weights of 100 boxes are x = 12.05 and s = 0.1. Find an 95% confidence interval for the mean fill weight of the boxes. Alpha = 0.05

Ans: \_x +- s/ /-n

Mean +- alpha/2 \* s/ square root of n

12.05 +- 1.96\* 0.1/ square root of 100 ==

12.03 or 12.07

Ex 2

N = 53

S = 3.2

Mean = 21.6

90 % confidence

Mean +- 1.645 \* 3.2/ square root of n

21.6 +- 0.73

=20.87 or 22.33

95% confidence

21.6 +- 1.96 \* 3.2 / square root of n

= 21.6 +- 0.87

= 22.47 or 20.73

Ex2 Q3:

0.87 (87%)

Q4:

0.3 = 1.96 \* 3.2/square root of n

Square root of N = (1.96 \* 3.2 ) / 0.3

N = ((1.96\*3.2) / 0.3) \*\* 2 = 436.81

Exercise 5

H0 : mu = 15

H1 : mu != (not equal) 15

s = 1.8

Ans:

Z = Xbar – mu/ s(sqrt n)

Z = 15.2 – 15/ 1.8(sqrt 87)

Z = 1.036

1-1.036

P value = 0.14917 = ≅0.15