Let  μ  be the true population mean/ average percentage of flights that depart on time.

Given that,

Sample Size,n=251

Sample mean, y― =75.65

sample standard deviation,s=3.91

significance level,  α =0.05

Here we have to construct a 95% confidence interval for average percentage of flights that depart on time.

We have,

A 100(1- α) % confidence interval for true population mean is ,

(barx-talpha/2,n-1\*s/\sqrt{n},barx+talpha/2,n-1\*s/\sqrt{n})

a)

for  α =0.05

t α2,n−1= t0.05/2,250 =1.9695

(barx-talpha/2,n-1\*s/\sqrt{n},barx+talpha/2,n-1\*s/\sqrt{n})

(75.65-1.9695\*3.91/\sqrt{251},75.65+1.9695\*3.91/\sqrt{251})

(75.1639,76.1361)

b)

**Interpretation:**

**There is 95% chance that the true population mean/ average percentage of flights that depart on time is between (75.1639,76.1361)**