# Problem Set 1

Ruairí Hallissey

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## 1 Problem 1: Education

Question 1. 90 Percent Confidence Interval = 93.95 / 102.91

Operations taken in R

Sample Size n ¡- length(y)

Sample Mean Mean ¡- mean(y)

Sample Standard Deviation SD ¡- sd(y)

Standard Error SE ¡- SD / sqrt(n)

Alpha alpha ¡- 0.10

T-Score t.score = qt(p=alpha/2, df=(n)-1,lower.tail=F)

Margin of Error margin.error ¡- t.score * SE

Alpha alpha ¡- 0.10

Lower and Upper Bound Interval

lowerinterval ¡- Mean - margin.error

upperinterval ¡- Mean + margin.error

Question 2.

Null hypothesis has not been falsified [t=(24)-.59574, p= .7215]. Cannot say the sample mean IQ (98.44) is significantly greater than the mean IQ of all students (100.00).

Operation in R

t.test(y, mu= 100, alternative = 'greater')

## 2 Problem 1: Political Economy

Question 1

There's less per-capita expenditure on housing assistance in states with less per-capita income

There's less per-capita expenditure on housing assistance in states with less per-capita income

There's less per-capita expenditure on housing assistance in states with less urban residents

Question 2

Region 4; Southwest