

# Intro to Social Science Data Analysis

## Seminar 7: Overview of Statistical Inference (I)

**Christopher Gandrud**

October 18, 2012

## Download Ames, Iowa Real Estate Data from OpenIntro

```
# Download data
download.file("http://bit.ly/P09XsF",
             destfile = "ames.RData")

# Load Data
load("ames.RData")
```

This data set contains every residential home sale in Ames, Iowa, USA between 2006 to 2010.

## Take a random sample

```
# Find number of observations
nrow(ames)

## [1] 2930

# Take a random sample of 100 observations
amesSamp <- ames[sample(1:nrow(ames), 100,
                        replace=FALSE),]

# Find number of observations in sample
nrow(amesSamp)

## [1] 100
```

## Find Variables

Find **3 continuous numeric variables** in the data set `ames`

## Describe

Choose descriptive statistics/graphs to describe the 3 variables **in your sample**.

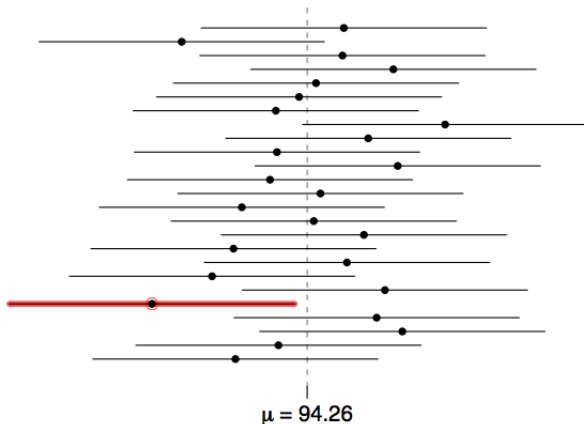
Using only the sample means, what do you **estimate the population means** are?

Did you make a correct inference?

# Graphs

What might this graph show?

Why is one of the lines highlighted in red?



## Nominal Data

What kind of population parameters could we be interested in for nominal data?