Benjamin Rothschild: PS8

Part 1: Biden

```
suppressWarnings(suppressMessages(library(tidyverse)))
suppressWarnings(suppressMessages(library(forcats)))
suppressWarnings(suppressMessages(library(broom)))
suppressWarnings(suppressMessages(library(modelr)))
suppressWarnings(suppressMessages(library(tree)))
suppressWarnings(suppressMessages(library(randomForest)))
suppressWarnings(suppressMessages(library(stringr)))
suppressWarnings(suppressMessages(library(ISLR)))
suppressWarnings(suppressMessages(library(gridExtra)))
suppressWarnings(suppressMessages(library(grid)))
suppressWarnings(suppressMessages(library(pROC)))
suppressWarnings(suppressMessages(library(gbm)))
suppressWarnings(suppressMessages(library(ggdendro)))
knitr::opts_chunk$set(echo = TRUE)
```

```
options(digits = 3)
set.seed(1234)
theme_set(theme_minimal())
biden <- read_csv("biden.csv")
```

```
## Parsed with column specification:
## cols(
##   biden = col_integer(),
##   female = col_integer(),
##   age = col_integer(),
##   educ = col_integer(),
##   dem = col_integer(),
##   rep = col_integer()
## )
```

```
biden_split <- resample_partition(biden, c(test = 0.3, train = 0.7))
mse <- function(model, data) {
  x <- modelr:::residuals(model, data)
  mean(x ^ 2, na.rm = TRUE)
}

fit <- tree(biden ~ female + age + dem + rep + educ, data = biden, control = tree.control(nobs = nrow(bi

mse <- function(model, data) {
  x <- modelr:::residuals(model, data)
  mean(x ^ 2, na.rm = TRUE)
}
mse(fit, biden)
```

I get a MSE of 297