

ECON 709B - Problem Set 4

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1. 7.29 Use the subsample of the CPS that you used for problems 3.24 and 3.25 (instead of the subsample requested in the problem)

```
library(tidyverse)

cps09mar <- read_delim("cps09mar.txt",
                      delim = "\t",
                      col_names = c("age", "female", "hisp", "education", "earnings",
                                     "hours", "week", "union", "uncov", "region", "race",
                                     "marital"),
                      col_types = "ddddddddddd") %>%
mutate(experience = age - education - 6,
       experience_2 = (experience^2)/100,
       wage = earnings / (hours*week),
       l_wage = log(wage),
       constant = 1) %>%
filter(race == 4,
       marital == 7,
       female == 0,
       experience < 45)

y <- cps09mar$l_wage

x <- cps09mar %>%
  select(education, experience, experience_2, constant) %>%
  as.matrix() %>%
  unname()

n <- dim(x)[1]
i <- diag(nrow = n, ncol = n)
```

*I worked on this problem set with a study group of Michael Nattinger, Andrew Smith, and Ryan Mather. I also discussed problems with Emily Case, Sarah Bass, and Danny Edgel.