Problem Set 7

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Question 1 Background:

Download the dataset ***quartet.dta*** *from the course website.*

1a) Load the dataset. The file is in a format compatible with Stata, but not with base R. Google how to load .dta files in R.

```
dataset <- read_dta("quartet.dta")
```

1b) Regress each y on its corresponding x (e.g., $y1$ on $x1$, $y2$ on $x2$) using the `lm()` command. Using stargazer, present the results in a nicely formatted table. Interpret the regression coefficients.

```
reg1 <- lm(y1 ~ x1, data = dataset)
reg2 <- lm(y2 ~ x2, data = dataset)
reg3 <- lm(y3 ~ x3, data = dataset)
reg4 <- lm(y4 ~ x4, data = dataset)

sum1 <- summary(reg1)
sum2 <- summary(reg2)
sum3 <- summary(reg3)
sum4 <- summary(reg4)

stargazer(reg1, type = "latex")
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Wed, Oct 26, 2022 - 12:42:14 PM
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] & y1 \\
```

```
## \hline \\[-1.8ex]
##  x1 & 0.500$^{***}$ \\
##   & (0.118) \\
##   & \\
##  Constant & 3.000$^{**}$ \\
##   & (1.125) \\
##   & \\
## \hline \\[-1.8ex]
## Observations & 11 \\
## R$^{2}$ & 0.667 \\
## Adjusted R$^{2}$ & 0.629 \\
## Residual Std. Error & 1.237 (df = 9) \\
## F Statistic & 17.990$^{***}$ (df = 1; 9) \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```