

FSRM588 HW 1

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#Question 1 *Test MSE, Training MSE, EPE*. Consider the linear regression model with p parameters, fit by least squares to a set of training data $(x_1, y_1), \dots, (x_N, y_N)$ draw from the population distribution where $x_i \sim N_p(0, \Sigma)$ and $y_i = x_i^T \beta + \epsilon_i$ with $\epsilon_i \sim N(0, \sigma^2)$ ## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed      dist
##  Min.   : 4.0    Min.   :  2.00
##  1st Qu.:12.0    1st Qu.: 26.00
##  Median :15.0    Median : 36.00
##  Mean   :15.4    Mean    : 42.98
##  3rd Qu.:19.0    3rd Qu.: 56.00
##  Max.   :25.0    Max.    :120.00
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.