

# ECON 5253: PS8

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## 1 Question 9: lm function estimates

The slope parameter estimates from the regression of the Y data vector onto the X matrix of covariate data is given in the table below. This was specifically performed by using the `lm` function in R. As was the case with the other methods that we used throughout the problem set, the `lm` method offers  $\hat{\beta}$  estimates that are quite close to those in the “ground truth” vector that we created. In other words, our methods appear to be working correctly in this case.

|          |                   |
|----------|-------------------|
|          | Model 1           |
| X1       | 1.501<br>(0.002)  |
| X2       | -0.991<br>(0.003) |
| X3       | -0.247<br>(0.003) |
| X4       | 0.744<br>(0.003)  |
| X5       | 3.504<br>(0.003)  |
| X6       | -1.999<br>(0.003) |
| X7       | 0.502<br>(0.003)  |
| X8       | 0.997<br>(0.003)  |
| X9       | 1.256<br>(0.003)  |
| X10      | 1.999<br>(0.003)  |
| Num.Obs. | 1e+05             |
| R2       | 0.971             |
| R2 Adj.  | 0.971             |
| AIC      | 144993.2          |
| BIC      | 145097.9          |
| Log.Lik. | -72485.615        |
| F        | 338240.012        |