## PS8\_Maddy

Ethan Maddy

April 1, 2021

## 1 Question no. 9

The estimates of  $\beta$  using the lm() function are quite close to the true  $\beta$  found in question no. 1. As seen in the table below, the model worked as desired. (i.e. the estimates are close enough to their true values for happiness in the lm() model)

X1 1.501 (0.002) X2 -0.991 (0.003) X3 -0.247 (0.003) X4 0.744 (0.003) X5 3.504 (0.003) X6 -1.999 (0.003) X7 0.502 (0.003) X8 0.997 (0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615 F 338240.012		Model 1
X2	X1	1.501
(0.003) X3		(0.002)
X3	X2	-0.991
X4 (0.003) X4 (0.003) X5 (0.003) X5 (0.003) X6 (0.003) X7 (0.003) X7 (0.003) X8 (0.003) X8 (0.003) X9 (1.256 (0.003) X10 (1.999 (0.003) X10 (1.999 (0.003)  Num.Obs. 1e+05 R2 (0.971 R2 Adj. (0.971 AIC (144993.2) BIC (145097.9) Log.Lik72485.615		(0.003)
X4 0.744 (0.003) X5 3.504 (0.003) X6 -1.999 (0.003) X7 0.502 (0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	X3	-0.247
(0.003) X5 3.504 (0.003) X6 -1.999 (0.003) X7 0.502 (0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615		(0.003)
X5 3.504 (0.003) X6 -1.999 (0.003) X7 0.502 (0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	X4	0.744
X6 (0.003) X6 (-1.999 (0.003) X7 0.502 (0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003)  Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615		,
X6 -1.999 (0.003) X7 0.502 (0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	X5	
(0.003) X7		` ,
X7 0.502 (0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	X6	
(0.003) X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003)  Num.Obs. 1e+05 R2 0.971 R2 Adj. AIC 144993.2 BIC 145097.9 Log.Lik72485.615		
X8 0.997 (0.003) X9 1.256 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	X7	
(0.003) X9 1.256 (0.003) X10 1.999 (0.003)  Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615		, ,
X9 1.256 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	X8	
X10 (0.003) X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	1.00	,
X10 1.999 (0.003) Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	X9	
(0.003)  Num.Obs. 1e+05 R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	3/40	,
Num.Obs.1e+05R20.971R2 Adj.0.971AIC144993.2BIC145097.9Log.Lik72485.615	X10	
R2 0.971 R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615		(0.003)
R2 Adj. 0.971 AIC 144993.2 BIC 145097.9 Log.Lik72485.615	Num.Obs.	1e+05
AIC 144993.2 BIC 145097.9 Log.Lik72485.615	R2	0.971
BIC 145097.9 Log.Lik72485.615	R2 Adj.	0.971
Log.Lik72485.615	AIC	144993.2
© .	BIC	145097.9
F 338240.012	~	
	F	338240.012