Stat763 HW09

1. Report your test on the claim that the model $y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \epsilon$ provides a good fit to x_1, x_2, x_3 and y stored in 4-19data.txt. Use SAS so the correctness of your computation for SSPE and its DF in HW08 can be confirmed.

2. Suppose

$SSE(\emptyset)$	=	249657
$SSE(\beta_0)$	=	1857
$SSE(\beta_1)$	=	798
$SSE(\beta_2)$	=	107.8
$SSE(\beta_0, \beta_1)$	=	78
$SSE(\beta_0, \beta_2)$	=	107.7
$SSE(\beta_1, \beta_2)$	=	79
$SSE(\beta_0, \beta_1, \beta_2)$	=	43

(1) For model $y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \epsilon$, fill out Type I and Type II SS.

	Type I SS	Type II SS
Intercept	_____	_____
X1	_____	_____
X2	_____	_____

(2) For model $y = \beta_1 x_1 + \beta_2 x_2 + \epsilon$,fill out Type I and Type II SS.

	Type I SS	Type II SS
X1	_____	_____
X2	_____	_____

3. Based on $n = 25$ observations, $\overline{y} = 22.4$ and $CSS(y) = \sum_i (y_i - \overline{y})^2 = 5785$. In model $y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \epsilon$,

	Type I SS
Intercept	12526
x1	5382
x2	168

. For model $y = \beta_0 + \beta_1 x_1 + \epsilon$, fill out ANOVA table

Source	DF	SS	MS	F
Model	____	_____	_____	_____
Error	____	_____	_____	
C.Total	____	_____		