Lab Assignment 9

Follow the following format

For each problem, turn in a copy of your SAS program, log window. Write down your answers.

Problem 1. P.180, 5.5

```
DATA PROB5_5;
   INPUT X Y Z;
DATALINES;
1 3 15
7 13 7
8 12 5
3 4 14
4 7 10
;

PROC REG DATA=PROB5_5;
   MODEL Y = X;
 RUN;
```

Output:

The SAS System

Root MSE	1.37607	**R-Square**	0.9314
Dependent Mean	7.80000	**Adj R-Sq**	0.9085
Coeff Var	17.64195		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	**1**	0.78916	1.25920	0.63	0.5753
X	**1**	1.52410	0.23882	6.38	0.0078

Comments:

The linear model has 2 parameters namely Intercept and Slope. SAS proc reg estimates the numeric values of the 2 parameters; they are showing from the result output 0.78916 and 1.52410 respectively. The question is that if these numeric estimates are significantly different from zero. If the estimates are not significantly from zero, equivalently we say the estimates can be ignored.

Therefore SAS proc reg test the null hypothesis that the estimates are zero. The p-value of the intercept is 0.5753, which is greater than 0.05; therefore the intercept is not significantly differ from zero. The

p-value of the slope is 0.0078, which is less than 0.05; therefore the slope is significantly differing from zero.