Chapter 3

**The example about advertisement and sales:**

**data** adsales;

input Month x y @@; /\* @@(double trailing) is used when you want more than one observation from a single record. It tells SAS to not to read a new record when an INPUT statement is encountered.\*/

datalines;

1 1 1 2 2 1 3 3 2 4 4 2 5 5 4

;

**run**;

**proc** **print** data=adsales;

**run**;

**proc** **gplot** data=adsales;/\* to get a scatter plot of y with respect to x \*/

title ‘Scatter Plot of x and y’;

plot y\* x;

**run**;

**quit**;

**proc** **reg** data = adsales corr; /\* linear regression model. corr: for covariance table.\*/

title 'Advertising-sales Regression'; /\* gives the name of the title\*/

model y= x;

**run**;

**proc** **reg** data = adsales corr; /\* linear regression model. /\* corr: for covariance table. outest: outputs a data set that contains parameter estimates and other model fit summary statistics\*/

title 'Advertising-sales Regression'; /\* gives the name of the title\*/

model y= x /clb clm cli p r;

**run**;

/\* construct regression model, regress y on x by format: y=x (or the name of y variable in your imported data on SAS=the name of x variable in your imported data on SAS), clb calls confidence intervals for beta, clm calls for confidence intervals for mean y, cli calls for prediction interval for individual y. p for prediction. r for residuals.\*/

**See 3.10 for a complete example on page 135.**

**The following is the SAS code for this example:**

**data** firedam;

input x y @@;

datalines;

3.4 26.2 1.8 17.8 4.6 31.3 2.3 23.1 3.1 27.5 5.5

36.0 0.7 14.1 3.0 22.3 2.6 19.6 4.3 31.3 2.1 24.0

1.1 17.3 6.1 43.2 4.8 36.4 3.8 26.1 3.5 .

;

**run**;

**proc print** data=firedam;

**run**;

**proc gplot** data=firedam;/\* to get a scatter plot of y with respect to x \*/

title ‘Scatter Plot of x and y’;

plot y\* x;

**run**;

**quit**;

**proc reg** data=firedam corr ; /\* linear regression model\*/

model y= x /clb clm cli alpha=**0.05** p r; /\*clb calls for confidence intervals. p for prediction. r for residuals.\*/

title 'fire damage regression'; /\* gives the name of the title\*/

**run**;