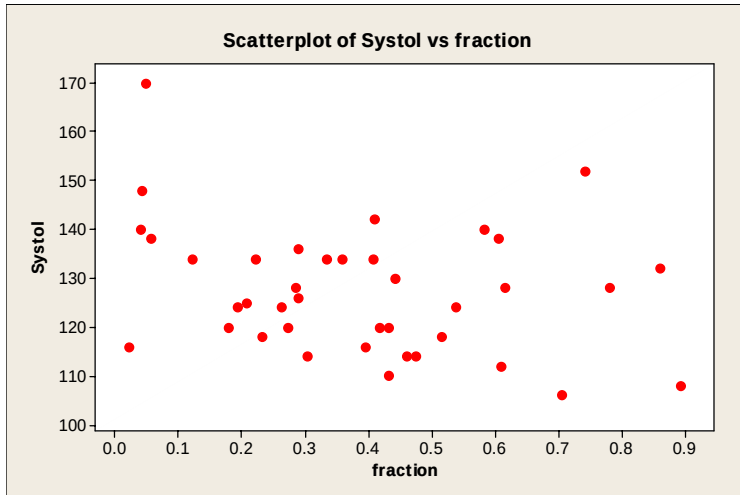


Peru Data:

The data are in C:\Program Files\MINITAB 14\Data\Peru.MTW and you can load the worksheet from the File > Open Worksheet menu path. You need to calculate fraction (from the Calc menu) as Years/Age.

The plot of Systolic Blood Pressure vs. Fraction follows:



Least Squares Fit for predicting Systolic Blood Pressure from Fraction:

Regression Analysis: Systol versus fraction

The regression equation is
 $\text{Systol} = 133 - 15.8 \text{ fraction}$

Predictor	Coef	SE Coef	T	P
Constant	133.496	4.038	33.06	0.000
fraction	-15.752	9.013	-1.75	0.089

S = 12.7697 R-Sq = 7.6% R-Sq(adj) = 5.1%

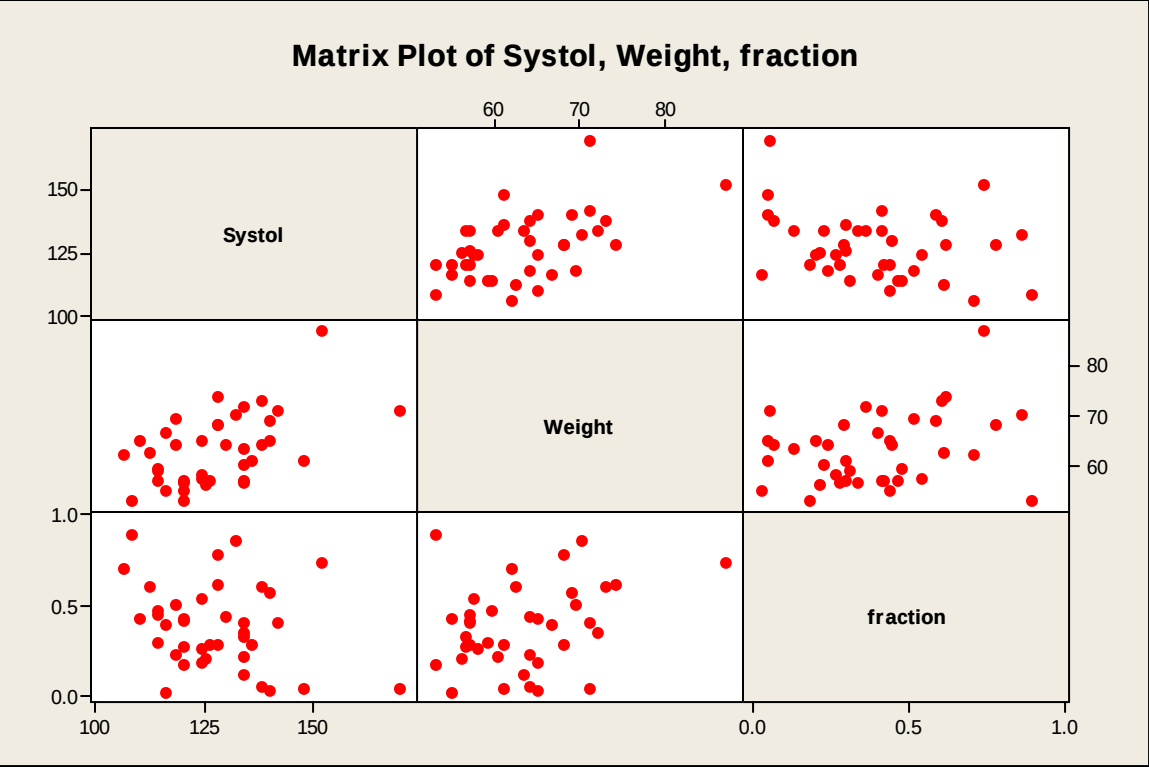
Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	498.1	498.1	3.05	0.089
Residual Error	37	6033.4	163.1		
Total	38	6531.4			

Unusual Observations

Obs	fraction	Systol	Fit	SE Fit	Residual	St Resid
1	0.048	170.00	132.75	3.67	37.25	3.05R
39	0.741	152.00	121.83	3.79	30.17	2.47R

R denotes an observation with a large standardized residual.



Correlations: Systol, Weight, fraction

	Systol	Weight
Weight	0.521 0.001	
fraction	-0.276 0.089	0.293 0.070

Cell Contents: Pearson correlation
P-Value

Regression Analysis: Systol versus fraction, Weight

The regression equation is
Systol = 60.9 - 26.8 fraction + 1.22 Weight

Predictor	Coef	SE Coef	T	P
Constant	60.90	14.28	4.26	0.000
fraction	-26.767	7.218	-3.71	0.001
Weight	1.2169	0.2337	5.21	0.000

S = 9.77719 R-Sq = 47.3% R-Sq(adj) = 44.4%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	2	3090.1	1545.0	16.16	0.000
Residual Error	36	3441.4	95.6		
Total	38	6531.4			

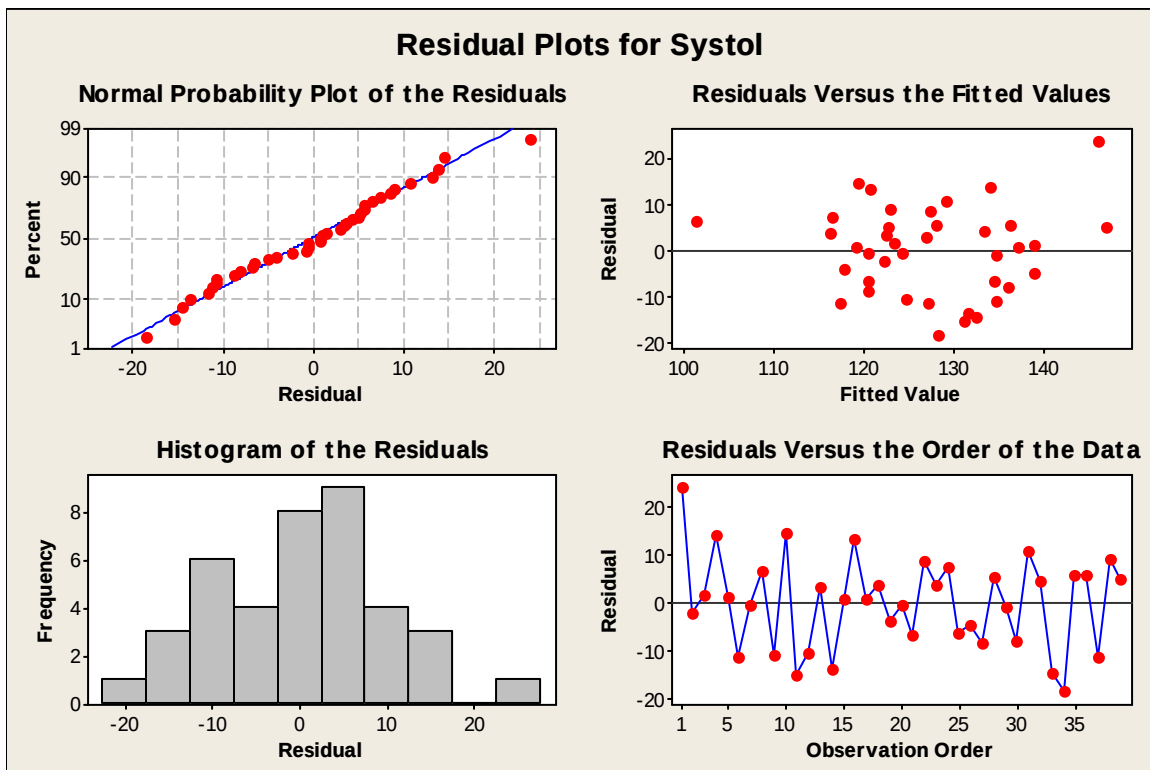
Source	DF	Seq SS
fraction	1	498.1
Weight	1	2592.0

Unusual Observations

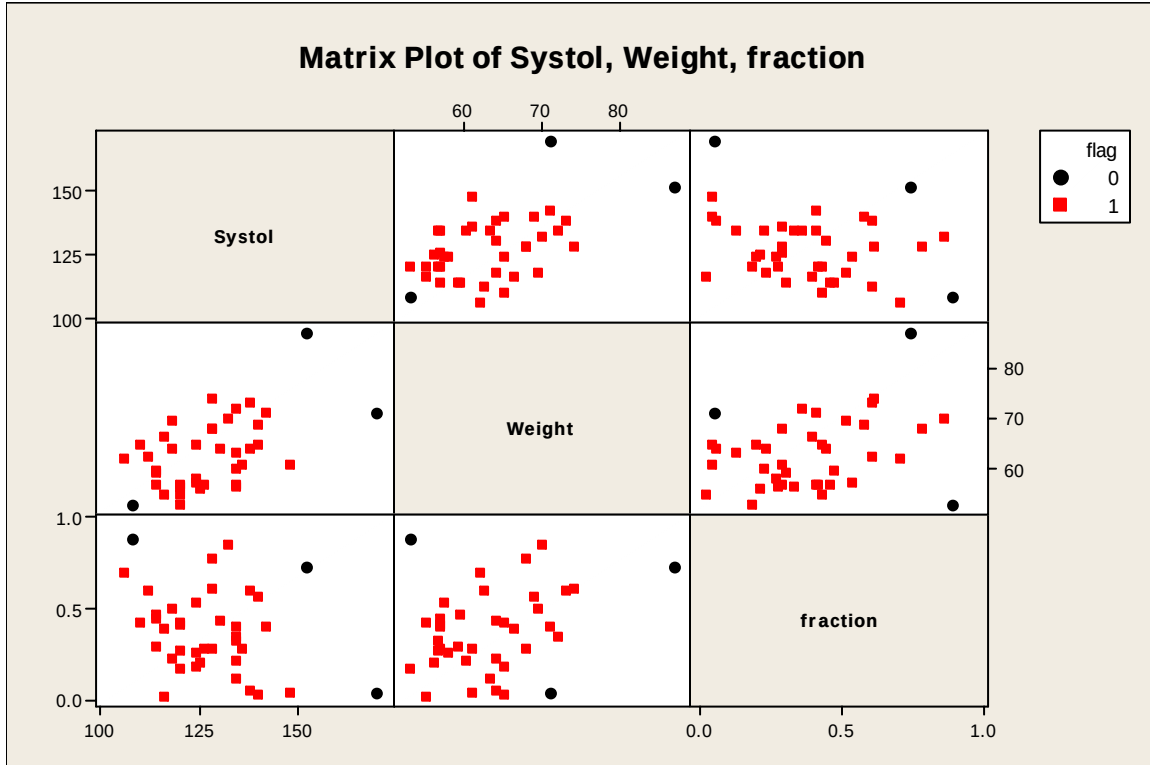
Obs	fraction	Systol	Fit	SE Fit	Residual	St Resid
1	0.048	170.00	146.02	3.80	23.98	2.66R
8	0.893	108.00	101.49	5.15	6.51	0.78 X
39	0.741	152.00	146.93	5.63	5.07	0.63 X

R denotes an observation with a large standardized residual.

X denotes an observation whose X value gives it large influence.



Looking at unusual observations:



Regression Analysis: Systol versus fraction, Weight

```
Weighted analysis using weights in flag <<<<<<<<<<<<<<-----
```

The regression equation is
 $\text{Systol} = 76.8 - 21.6 \text{ fraction} + 0.916 \text{ Weight}$

```
36 cases used, 3 cases contain missing values
or had zero weight
```

Predictor	Coef	SE Coef	T	P
Constant	76.85	17.11	4.49	0.000
fraction	-21.645	8.048	-2.69	0.011
Weight	0.9157	0.2886	3.17	0.003

S = 8.99614 R-Sq = 27.3% R-Sq(adj) = 22.9%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	2	1002.04	501.02	6.19	0.005
Residual Error	33	2670.71	80.93		
Total	35	3672.75			

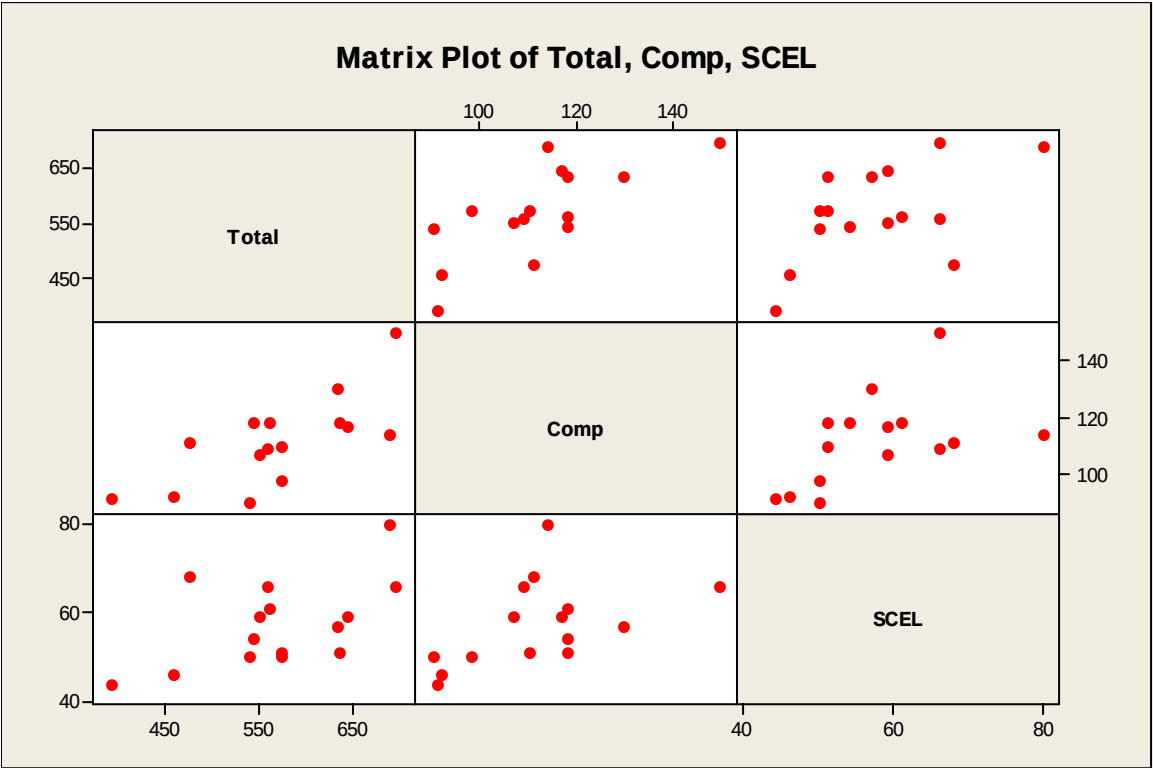
Source	DF	Seq SS
fraction	1	187.12
Weight	1	814.92

GCE Analysis

Correlations: Total, Comp, SCEL

	Total	Comp
Comp	0.731	0.002
SCEL	0.548	0.509
	0.035	0.053

Cell Contents: Pearson correlation
P-Value



Regression Analysis: Total versus Comp

The regression equation is
Total = 129 + 3.95 Comp

Predictor	Coef	SE Coef	T	P
Constant	128.5	115.2	1.12	0.285
Comp	3.948	1.023	3.86	0.002

S = 60.1940 R-Sq = 53.4% R-Sq(adj) = 49.8%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	53970	53970	14.90	0.002
Residual Error	13	47103	3623		
Total	14	101073			

Unusual Observations

Obs	Comp	Total	Fit	SE Fit	Residual	St Resid
6	150	698.0	720.8	42.3	-22.8	-0.53 X

X denotes an observation whose X value gives it large influence.

Regression Analysis: Total versus SCEL

The regression equation is
Total = 292 + 4.83 SCEL

Predictor	Coef	SE Coef	T	P
Constant	291.6	119.0	2.45	0.029
SCEL	4.826	2.045	2.36	0.035

S = 73.7732 R-Sq = 30.0% R-Sq(adj) = 24.6%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	1	30321	30321	5.57	0.035
Residual Error	13	70752	5442		
Total	14	101073			

Unusual Observations

Obs	SCEL	Total	Fit	SE Fit	Residual	St Resid
1	68.0	476.0	619.8	28.8	-143.8	-2.12R
10	80.0	690.0	677.7	49.9	12.3	0.23 X

R denotes an observation with a large standardized residual.
X denotes an observation whose X value gives it large influence.

Regression Analysis: Total versus Comp, SCEL

The regression equation is
Total = 81 + 3.30 Comp + 2.09 SCEL

Predictor	Coef	SE Coef	T	P
Constant	81.2	122.4	0.66	0.520
Comp	3.296	1.180	2.79	0.016
SCEL	2.091	1.925	1.09	0.299

S = 59.7811 R-Sq = 57.6% R-Sq(adj) = 50.5%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	2	58188	29094	8.14	0.006
Residual Error	12	42885	3574		
Total	14	101073			

Source	DF	Seq SS
Comp	1	53970
SCEL	1	4218

Unusual Observations

Obs	Comp	Total	Fit	SE Fit	Residual	St Resid
1	111	476.0	589.2	25.7	-113.2	-2.10R

R denotes an observation with a large standardized residual.