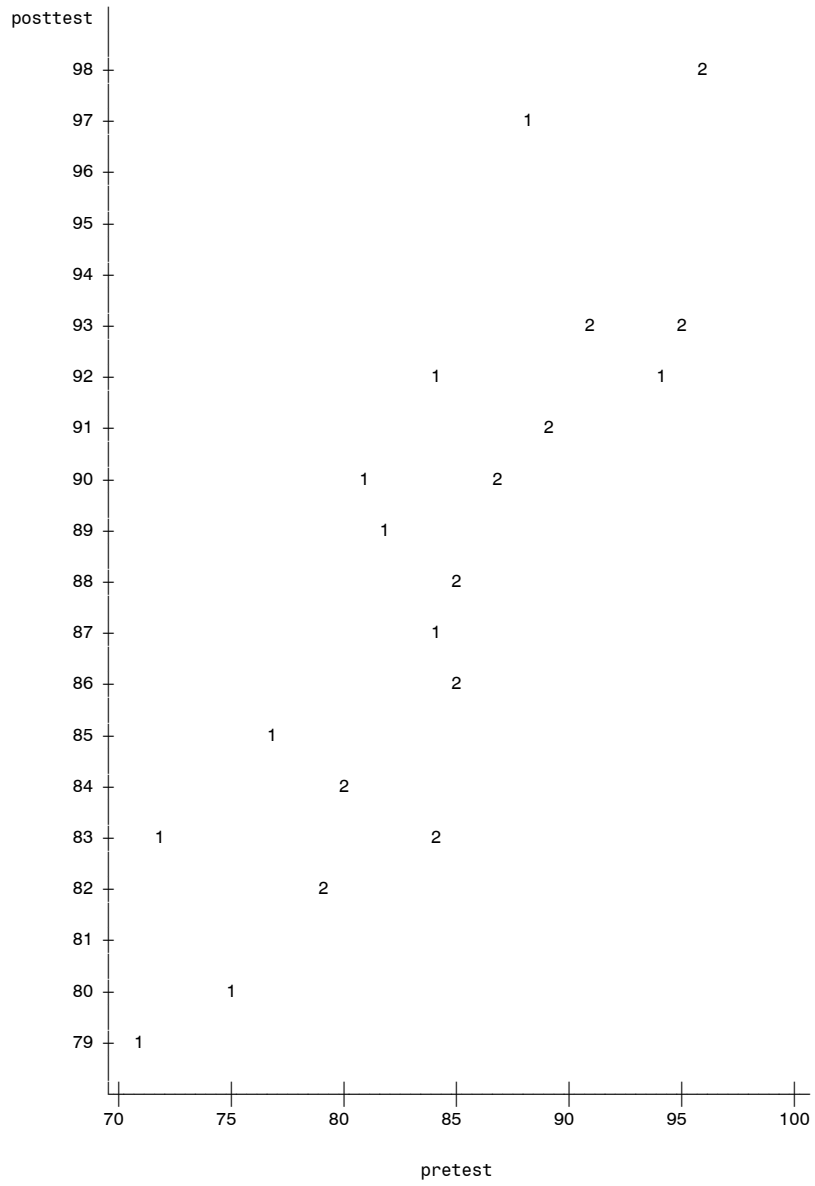


| Obs | group | pretest | posttest | group2 | g2pre |
|-----|-------|---------|----------|--------|-------|
| 1   | 1     | 72      | 83       | 0      | 0     |
| 2   | 1     | 77      | 85       | 0      | 0     |
| 3   | 1     | 81      | 90       | 0      | 0     |
| 4   | 1     | 84      | 92       | 0      | 0     |
| 5   | 1     | 88      | 97       | 0      | 0     |
| 6   | 1     | 94      | 92       | 0      | 0     |
| 7   | 1     | 71      | 79       | 0      | 0     |
| 8   | 1     | 75      | 80       | 0      | 0     |
| 9   | 1     | 82      | 89       | 0      | 0     |
| 10  | 1     | 84      | 87       | 0      | 0     |
| 11  | 2     | 91      | 93       | 1      | 91    |
| 12  | 2     | 85      | 88       | 1      | 85    |
| 13  | 2     | 89      | 91       | 1      | 89    |
| 14  | 2     | 95      | 93       | 1      | 95    |
| 15  | 2     | 80      | 84       | 1      | 80    |
| 16  | 2     | 96      | 98       | 1      | 96    |
| 17  | 2     | 79      | 82       | 1      | 79    |
| 18  | 2     | 87      | 90       | 1      | 87    |
| 19  | 2     | 84      | 83       | 1      | 84    |
| 20  | 2     | 85      | 86       | 1      | 85    |

Plot of posttest\*pretest. Symbol is value of group.



**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: posttest**

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

| Analysis of Variance |    |                |             |         |        |
|----------------------|----|----------------|-------------|---------|--------|
| Source               | DF | Sum of Squares | Mean Square | F Value | Pr > F |
| Model                | 1  | 9.80000        | 9.80000     | 0.33    | 0.5719 |
| Error                | 18 | 532.00000      | 29.55556    |         |        |
| Corrected Total      | 19 | 541.80000      |             |         |        |

|                |          |          |         |
|----------------|----------|----------|---------|
| Root MSE       | 5.43650  | R-Square | 0.0181  |
| Dependent Mean | 88.10000 | Adj R-Sq | -0.0365 |
| Coeff Var      | 6.17083  |          |         |

| Parameter Estimates |    |                    |                |         |         |
|---------------------|----|--------------------|----------------|---------|---------|
| Variable            | DF | Parameter Estimate | Standard Error | t Value | Pr >  t |
| Intercept           | 1  | 87.40000           | 1.71917        | 50.84   | <.0001  |
| group2              | 1  | 1.40000            | 2.43128        | 0.58    | 0.5719  |

**The REG Procedure**  
**Model: MODEL2**  
**Dependent Variable: posttest**

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

| Analysis of Variance |    |                |             |         |        |
|----------------------|----|----------------|-------------|---------|--------|
| Source               | DF | Sum of Squares | Mean Square | F Value | Pr > F |
| Model                | 1  | 390.35423      | 390.35423   | 46.40   | <.0001 |
| Error                | 18 | 151.44577      | 8.41365     |         |        |
| Corrected Total      | 19 | 541.80000      |             |         |        |

|                |          |          |        |
|----------------|----------|----------|--------|
| Root MSE       | 2.90063  | R-Square | 0.7205 |
| Dependent Mean | 88.10000 | Adj R-Sq | 0.7049 |
| Coeff Var      | 3.29243  |          |        |

| Parameter Estimates |    |                    |                |         |         |
|---------------------|----|--------------------|----------------|---------|---------|
| Variable            | DF | Parameter Estimate | Standard Error | t Value | Pr >  t |
| Intercept           | 1  | 34.64993           | 7.87389        | 4.40    | 0.0003  |
| pretest             | 1  | 0.63669            | 0.09347        | 6.81    | <.0001  |

**The REG Procedure**  
**Model: MODEL3**  
**Dependent Variable: posttest**

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

| Analysis of Variance |    |                |             |         |        |
|----------------------|----|----------------|-------------|---------|--------|
| Source               | DF | Sum of Squares | Mean Square | F Value | Pr > F |
| Model                | 2  | 433.29379      | 216.64689   | 33.94   | <.0001 |
| Error                | 17 | 108.50621      | 6.38272     |         |        |
| Corrected Total      | 19 | 541.80000      |             |         |        |

|                |          |          |        |
|----------------|----------|----------|--------|
| Root MSE       | 2.52640  | R-Square | 0.7997 |
| Dependent Mean | 88.10000 | Adj R-Sq | 0.7762 |
| Coeff Var      | 2.86766  |          |        |

| Parameter Estimates |    |                    |                |         |         |
|---------------------|----|--------------------|----------------|---------|---------|
| Variable            | DF | Parameter Estimate | Standard Error | t Value | Pr >  t |
| Intercept           | 1  | 27.26239           | 7.42597        | 3.67    | 0.0019  |
| pretest             | 1  | 0.74428            | 0.09137        | 8.15    | <.0001  |
| group2              | 1  | -3.28895           | 1.26803        | -2.59   | 0.0189  |

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: posttest**

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

| Analysis of Variance |    |                |             |         |        |
|----------------------|----|----------------|-------------|---------|--------|
| Source               | DF | Sum of Squares | Mean Square | F Value | Pr > F |
| Model                | 3  | 438.50104      | 146.16701   | 22.64   | <.0001 |
| Error                | 16 | 103.29896      | 6.45619     |         |        |
| Corrected Total      | 19 | 541.80000      |             |         |        |

|                |          |          |        |
|----------------|----------|----------|--------|
| Root MSE       | 2.54090  | R-Square | 0.8093 |
| Dependent Mean | 88.10000 | Adj R-Sq | 0.7736 |
| Coeff Var      | 2.88411  |          |        |

| Parameter Estimates |    |                    |                |         |         |
|---------------------|----|--------------------|----------------|---------|---------|
| Variable            | DF | Parameter Estimate | Standard Error | t Value | Pr >  t |
| Intercept           | 1  | 32.54685           | 9.50805        | 3.42    | 0.0035  |
| pretest             | 1  | 0.67888            | 0.11725        | 5.79    | <.0001  |
| group2              | 1  | -17.64451          | 16.03547       | -1.10   | 0.2875  |
| g2pre               | 1  | 0.16955            | 0.18879        | 0.90    | 0.3825  |

*The MEANS Procedure*

| group | N<br>Obs | Variable | N  | Mean       | Std Dev   | Minimum    | Maximum    |
|-------|----------|----------|----|------------|-----------|------------|------------|
| 1     | 10       | pretest  | 10 | 80.8000000 | 7.2234187 | 71.0000000 | 94.0000000 |
|       |          | posttest | 10 | 87.4000000 | 5.7193628 | 79.0000000 | 97.0000000 |
| 2     | 10       | pretest  | 10 | 87.1000000 | 5.7242176 | 79.0000000 | 96.0000000 |
|       |          | posttest | 10 | 88.8000000 | 5.1380930 | 82.0000000 | 98.0000000 |

*The MEANS Procedure*

| <b>Variable</b> | <b>N</b> | <b>Mean</b> | <b>Std Dev</b> | <b>Minimum</b> | <b>Maximum</b> |
|-----------------|----------|-------------|----------------|----------------|----------------|
| pretest         | 20       | 83.9500000  | 7.1190996      | 71.0000000     | 96.0000000     |
| posttest        | 20       | 88.1000000  | 5.3400177      | 79.0000000     | 98.0000000     |



*The GLM Procedure*

| Class Level Information |        |        |
|-------------------------|--------|--------|
| Class                   | Levels | Values |
| group                   | 2      | 1 2    |

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

The GLM Procedure

Dependent Variable: posttest

| Source          | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model           | 1  | 9.8000000      | 9.8000000   | 0.33    | 0.5719 |
| Error           | 18 | 532.0000000    | 29.5555556  |         |        |
| Corrected Total | 19 | 541.8000000    |             |         |        |

| R-Square | Coeff Var | Root MSE | posttest Mean |
|----------|-----------|----------|---------------|
| 0.018088 | 6.170831  | 5.436502 | 88.10000      |

| Source | DF | Type I SS  | Mean Square | F Value | Pr > F |
|--------|----|------------|-------------|---------|--------|
| group  | 1  | 9.80000000 | 9.80000000  | 0.33    | 0.5719 |

| Source | DF | Type III SS | Mean Square | F Value | Pr > F |
|--------|----|-------------|-------------|---------|--------|
| group  | 1  | 9.80000000  | 9.80000000  | 0.33    | 0.5719 |

*The GLM Procedure*

| Class Level Information |        |        |
|-------------------------|--------|--------|
| Class                   | Levels | Values |
| group                   | 2      | 1 2    |

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

The GLM Procedure

Dependent Variable: posttest

| Source          | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model           | 3  | 438.5010369    | 146.1670123 | 22.64   | <.0001 |
| Error           | 16 | 103.2989631    | 6.4561852   |         |        |
| Corrected Total | 19 | 541.8000000    |             |         |        |

| R-Square | Coeff Var | Root MSE | posttest Mean |
|----------|-----------|----------|---------------|
| 0.809341 | 2.884112  | 2.540902 | 88.10000      |

| Source        | DF | Type I SS   | Mean Square | F Value | Pr > F |
|---------------|----|-------------|-------------|---------|--------|
| group         | 1  | 9.8000000   | 9.8000000   | 1.52    | 0.2357 |
| pretest       | 1  | 423.4937868 | 423.4937868 | 65.60   | <.0001 |
| pretest*group | 1  | 5.2072501   | 5.2072501   | 0.81    | 0.3825 |

| Source        | DF | Type III SS | Mean Square | F Value | Pr > F |
|---------------|----|-------------|-------------|---------|--------|
| group         | 1  | 7.8168452   | 7.8168452   | 1.21    | 0.2875 |
| pretest       | 1  | 422.5454319 | 422.5454319 | 65.45   | <.0001 |
| pretest*group | 1  | 5.2072501   | 5.2072501   | 0.81    | 0.3825 |

*The GLM Procedure*

| Class Level Information |        |        |
|-------------------------|--------|--------|
| Class                   | Levels | Values |
| group                   | 2      | 1 2    |

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

The GLM Procedure

Dependent Variable: posttest

| Source          | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model           | 2  | 433.2937868    | 216.6468934 | 33.94   | <.0001 |
| Error           | 17 | 108.5062132    | 6.3827184   |         |        |
| Corrected Total | 19 | 541.8000000    |             |         |        |

| R-Square | Coeff Var | Root MSE | posttest Mean |
|----------|-----------|----------|---------------|
| 0.799730 | 2.867655  | 2.526404 | 88.10000      |

| Source  | DF | Type I SS   | Mean Square | F Value | Pr > F |
|---------|----|-------------|-------------|---------|--------|
| group   | 1  | 9.8000000   | 9.8000000   | 1.54    | 0.2321 |
| pretest | 1  | 423.4937868 | 423.4937868 | 66.35   | <.0001 |

| Source  | DF | Type III SS | Mean Square | F Value | Pr > F |
|---------|----|-------------|-------------|---------|--------|
| group   | 1  | 42.9395524  | 42.9395524  | 6.73    | 0.0189 |
| pretest | 1  | 423.4937868 | 423.4937868 | 66.35   | <.0001 |

*The GLM Procedure  
Least Squares Means*

| group | posttest<br>LSMEAN |
|-------|--------------------|
| 1     | 89.7444735         |
| 2     | 86.4555265         |

Plot of res\*pred. Legend: A = 1 obs, B = 2 obs, etc.

