```
/* x3_3.sas */
/* Purpose:  */

title1 'Example 3.3.';

data a;
  input y a b;
  cards;
10.11 1   0
 0.81 0   1
 5.24 0.5 0.5
;

proc print data=a;
title2 'List of data.';

proc glm data=a;
  model y=a b /noint solution xpx inverse;
title2 'Analysis by GLM.';

run;
```

```
                          Example 3.3.                                 1
                          List of data.

                    Obs       y       a      b

                     1      10.11    1.0    0.0
                     2       0.81    0.0    1.0
                     3       5.24    0.5    0.5

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                          Example 3.3.                                 2
                        Analysis by GLM.

                       The GLM Procedure

                Number of Observations Read           3
                Number of Observations Used           3

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                          Example 3.3.                                 3
                        Analysis by GLM.

                       The GLM Procedure

                        The X'X Matrix

                           a                 b                 y

      a                 1.25              0.25             12.73
      b                 0.25              1.25              3.43
      y                12.73              3.43          130.3258

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                          Example 3.3.                                 4
                        Analysis by GLM.

                       The GLM Procedure

                      X'X Inverse Matrix

                           a                 b                 y

      a         0.8333333333      -0.166666667      10.036666667
      b         -0.166666667      0.8333333333      0.7366666667
      y         10.036666667      0.7366666667      0.0322666667
```



```
                          Example 3.3.                                 5
                        Analysis by GLM.

                       The GLM Procedure

Dependent Variable: y

                                            Sum of
 Source                      DF            Squares     Mean Square    F Value    Pr > F

 Model                        2        130.2935333      65.1467667    2019.01    0.0157

 Error                        1          0.0322667       0.0322667

 Uncorrected Total            3        130.3258000


               R-Square     Coeff Var      Root MSE        y Mean

               0.999752      3.334701      0.179629      5.386667

NOTE: No intercept term is used: R-square is not corrected for the mean.


 Source                      DF          Type I SS     Mean Square    F Value    Pr > F

 a                            1        129.6423200     129.6423200    4017.84    0.0100
 b                            1          0.6512133       0.6512133      20.18    0.1394


 Source                      DF        Type III SS     Mean Square    F Value    Pr > F

 a                            1        120.8816133     120.8816133    3746.33    0.0104
 b                            1          0.6512133       0.6512133      20.18    0.1394


                                                 Standard
       Parameter           Estimate               Error    t Value    Pr > |t|

       a                10.03666667          0.16397832      61.21      0.0104
       b                 0.73666667          0.16397832       4.49      0.1394
```