```
GRAPH:~KGRAPH.TMP


   WINKS 4.65                                          January 10,2002
   ------------------------------------------------------------------------
   Descriptive Statistics          D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\FM.DBF
   ------------------------------------------------------------------------
   Variable Name is AREA


   N         = 127             Missing or Deleted = 0
   Mean      = 12.31693              St. Dev (n-1) = 17.25737
   Median    = 4.75                  St. Dev (n)   = 17.1893
   Minimum   = 0.25                      S.E.M.    = 1.53134
   Maximum   = 102.00                  Variance    = 297.81691
   Sum       = 1564.25                Coef. Var.   = 1.40111
   ------------------------------------------------------------------------
   Percentiles:                          Tukey Five Number Summary:
   0.0%         = 0.25    Minimum         Minimum  = 0.25
   0.5%         = 0.25                    Fourth   = 0.75
   2.5%         = 0.25                    Median   = 4.75
   10.0%        = 0.25                    Fourth   = 17.25
   25.0%        = 0.75    Quartile        Maximum  = 102.00
   50.0%        = 4.75    Median
   75.0%        = 17.25   Quartile
   90.0%        = 36.79999
   97.5%        = 60.40001
   99.5%        = 102.00             Test for normality results:
   100.0%       = 102.00   Maximum    D = .242      p <= 0.001


   Five number summary was calculated using the technique from UNDERSTANDING
   ROBUST AND EXPLORATORY DATA ANALYSIS by Hoaglin, Mosteller And Tukey. See
   complete reference in WINKS manual.


   Confidence Intervals about the mean:
   ------------------------------------------------------------------------
   80 % C.I. based on a t(126) critical value of 1.29 is (10.3415, 14.29236)
   90 % C.I. based on a t(126) critical value of 1.66 is (9.7749, 14.85896)
   95 % C.I. based on a t(126) critical value of 1.98 is (9.28487, 15.34899)
   98 % C.I. based on a t(126) critical value of 2.36 is (8.70296, 15.9309)
   99 % C.I. based on a t(126) critical value of 2.62 is (8.30481, 16.32905)


   The normality test suggests that the data are not normally distributed.
   The test for normality is a modified Kolmogorov-Smirnov test based on
   papers by Lilliefors and Dallal & Wilkinson. References in latenews.txt.
```
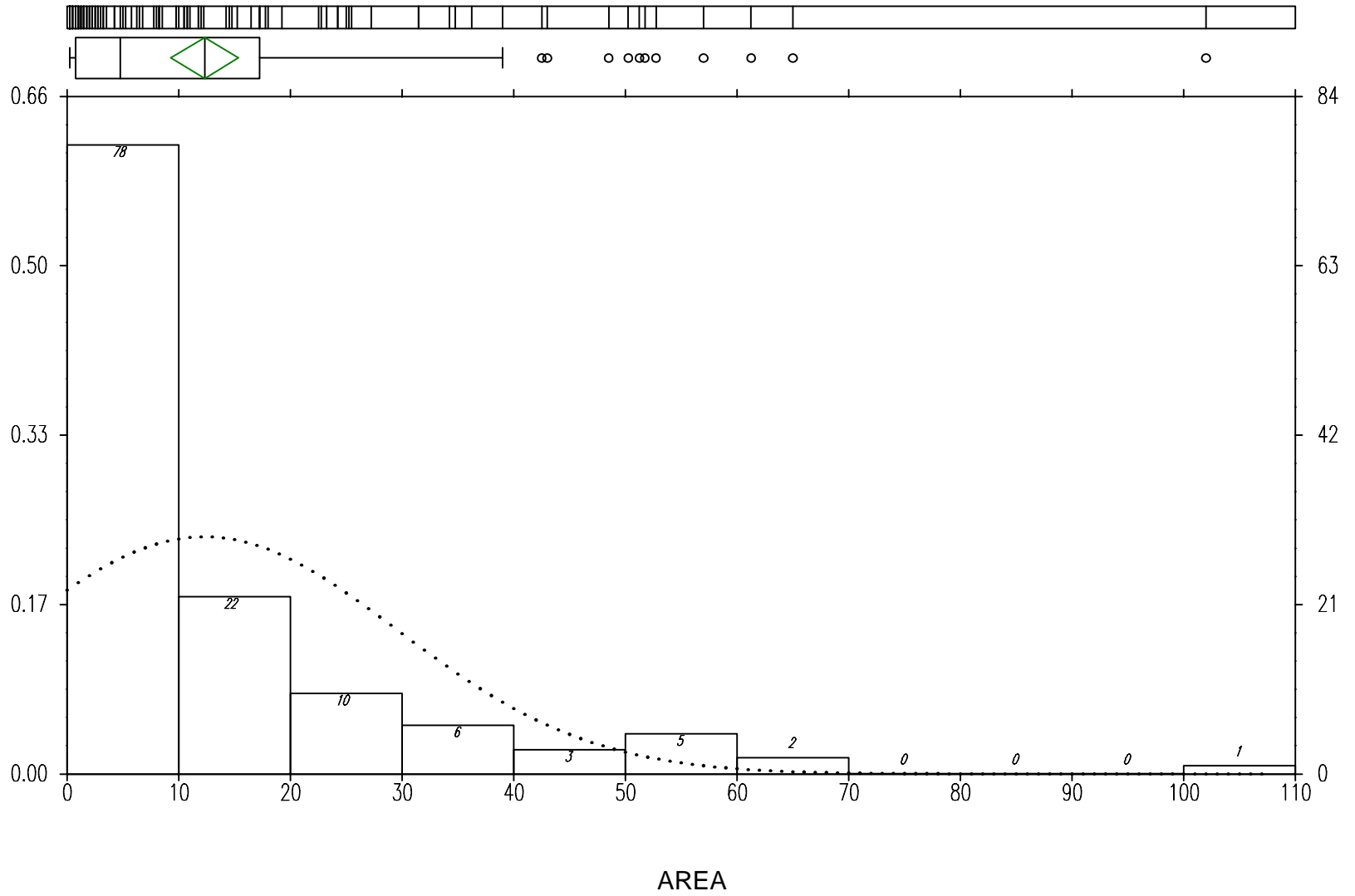
FM Closures — Area

AREA

```
GRAPH:~KGRAPH.TMP


   WINKS 4.65                                         January 10,2002
   ----------------------------------------------------------------------
   Descriptive Statistics           D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\FM.DBF
   ----------------------------------------------------------------------
   Variable Name is HEIGHT


   N          = 127            Missing or Deleted = 0
   Mean       = 407.92362            St. Dev (n-1) = 432.50913
   Median     = 272.30              St. Dev (n)   = 430.80298
   Minimum    = 0.60                     S.E.M.   = 38.37898
   Maximum    = 2128.30             Variance     = 187,064
   Sum        = 51806.30018         Coef. Var.   = 1.06027
   ----------------------------------------------------------------------
   Percentiles:                        Tukey Five Number Summary:
   0.0%         = 0.60     Minimum       Minimum = 0.60
   0.5%         = 0.60                   Fourth  = 85.00
   2.5%         = 15.86                  Median  = 272.30
   10.0%        = 34.00                  Fourth  = 591.40
   25.0%        = 84.60     Quartile     Maximum = 2128.30
   50.0%        = 272.30    Median
   75.0%        = 591.50    Quartile
   90.0%        = 962.2799
   97.5%        = 1671.621
   99.5%        = 2128.30               Test for normality results:
   100.0%       = 2128.30 Maximum       D = .174     p <= 0.001


   Five number summary was calculated using the technique from UNDERSTANDING
   ROBUST AND EXPLORATORY DATA ANALYSIS by Hoaglin, Mosteller And Tukey. See
   complete reference in WINKS manual.


   Confidence Intervals about the mean:
   ----------------------------------------------------------------------
   80 % C.I. based on a t(126) critical value of 1.29 is (358.41474, 457.43251)
   90 % C.I. based on a t(126) critical value of 1.66 is (344.21452, 471.63273)
   95 % C.I. based on a t(126) critical value of 1.98 is (331.93324, 483.914)
   98 % C.I. based on a t(126) critical value of 2.36 is (317.34923, 498.49802)
   99 % C.I. based on a t(126) critical value of 2.62 is (307.3707, 508.47655)


   The normality test suggests that the data are not normally distributed.
   The test for normality is a modified Kolmogorov-Smirnov test based on
   papers by Lilliefors and Dallal & Wilkinson. References in latenews.txt.
```
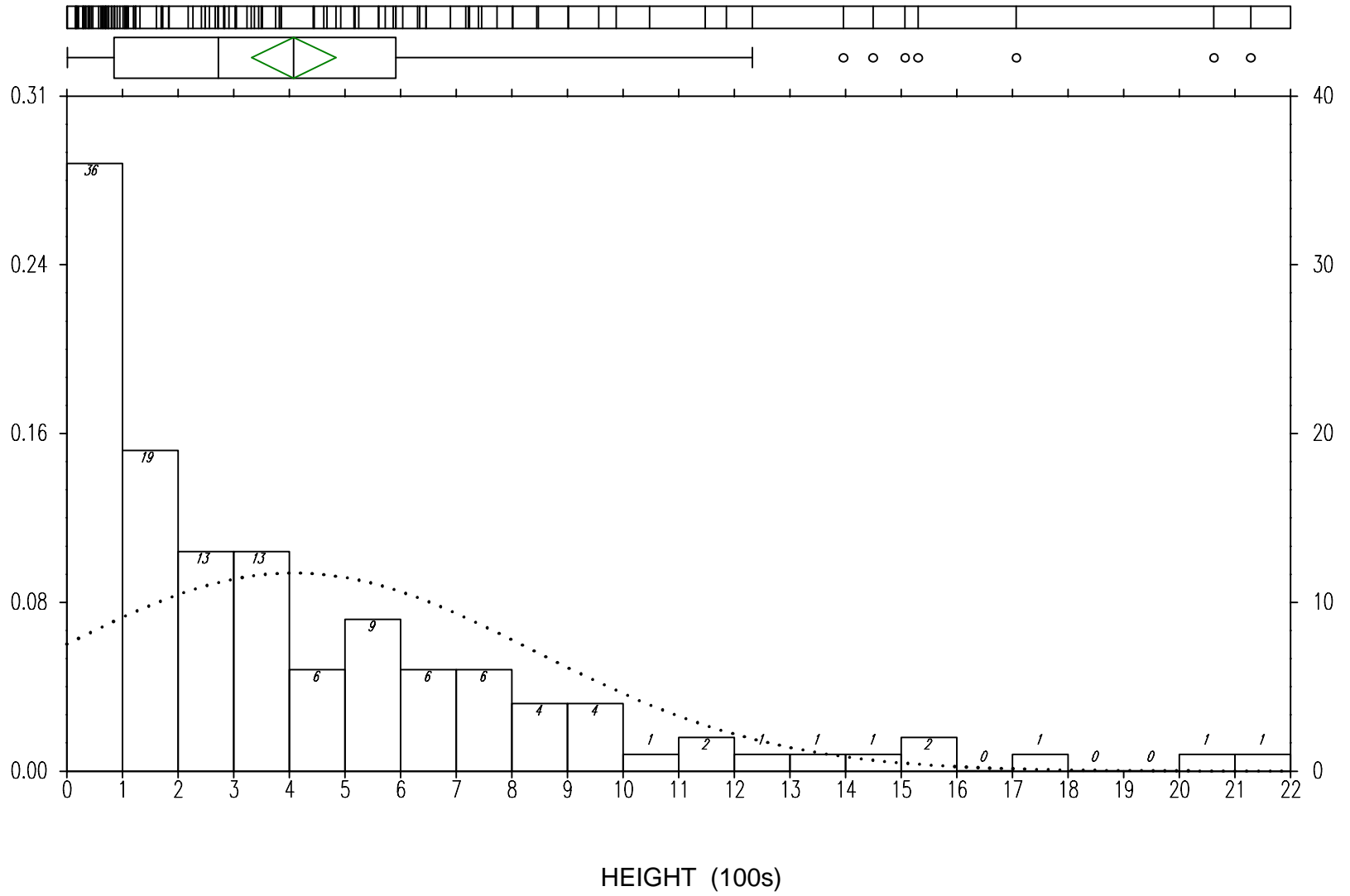
FM Closures – Height

HEIGHT (100s)

```
GRAPH:~KGRAPH.TMP


 WINKS 4.65                                            January 10,2002
 ----------------------------------------------------------------------
 Linear Regression and CorrelationD:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\FM.DBF
 ----------------------------------------------------------------------


 Dependent variable is HEIGHT,   1  independent variables, 127  cases.
 ----------------------------------------------------------------------
 Variable     Coefficient         St. Error      t-value       p(2 tail)
 ----------------------------------------------------------------------
 Intercept    182.04332           32.30927       5.6343992     <.001
 AREA         18.339011           1.5278707      12.002986     <.001
 ----------------------------------------------------------------------
 R-Square = 0.5354          Adjusted R-Square = 0.5317


 Analysis of Variance to Test Regression Relation

 Source       Sum of Sqs       df  Mean Sq          F          p-value
 ----------------------------------------------------------------------
 Regression   12620359.7181     1  12620359.7181 144.07167     <.001
 Error          1.09E+07       125  87597.786
 ----------------------------------------------------------------------
 Total        23570082.9932    126


 A low p-value suggests that the dependent variable HEIGHT
 may be linearly related to independent variable(s).


 ----------------------------------------------------------------------
 MEAN X =      12.317   S.D. X =       17.257   CORR XSS =     37524.93
 MEAN Y =     407.924   S.D. Y =      432.509   CORR YSS = 23570090.0
 REGRESSION MS=12620359.718              RESIDUAL MS=  87597.786
 ----------------------------------------------------------------------


 Pearson's r (Correlation Coefficient)= 0.7317

 The linear regression equation is:
     HEIGHT =  182.0433  +  18.33901 * AREA

 Test of hypothesis to determine significance of relationship:
     H(null): Slope = 0   or  H(null): r = 0    (two-tailed test)
     t = 12.0   with   125 degrees of freedom   p <= .001

     Note: A low p-value implies that the slope does not = 0.
```
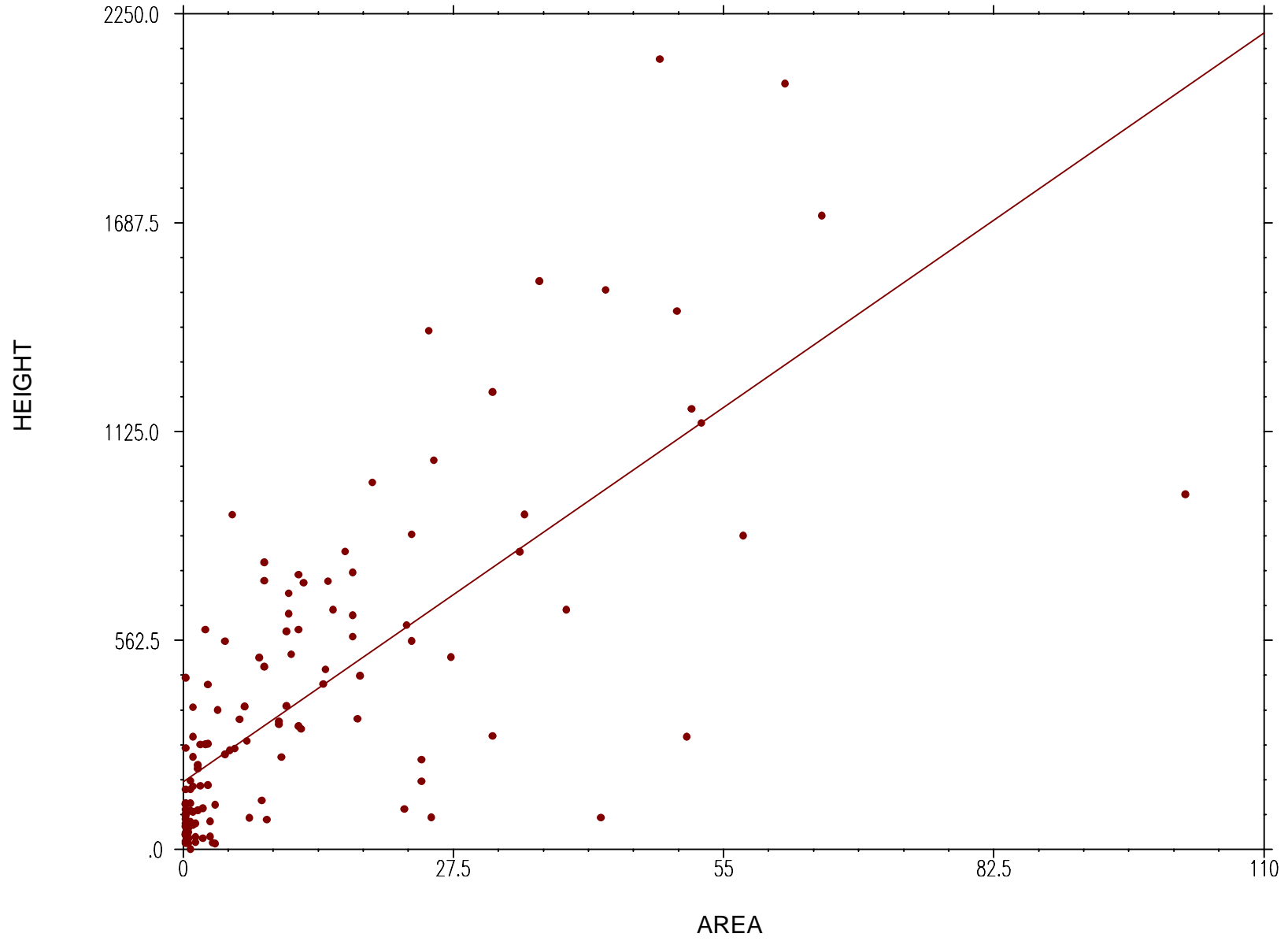
FM Closures

```
------------------------------------------------------------------------
Correlation Coefficients          D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\FM.DBF
------------------------------------------------------------------------
```

Variables used : AREA and HEIGHT

Number of cases used: 127

Pearson's r (Correlations Coefficient) = 0.7317   R-Square = 0.5354

  Test of hypothesis to determine significance of relationship:
     H(null): Slope = 0   or H(null): r = 0

  (Pearson's) t = 12.00299 with 125 d.f.   p < 0.001
     (A low p-value implies that the slope does not = 0.)

Spearman's Rank Correlation Coefficient = 0.7590

  (Spearman's) t = 13.03485 with 125 d.f.   p < 0.001

```
GRAPH:~KGRAPH.TMP


  WINKS 4.65                                               January 10,2002
  ------------------------------------------------------------------------
  Linear Regression and CorrelationD:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\FM.DBF
  ------------------------------------------------------------------------


  Dependent variable is LOGHEIGHT,   1  independent variables, 127  cases.
  ------------------------------------------------------------------------
  Variable      Coefficient         St. Error      t-value        p(2 tail)
  ------------------------------------------------------------------------
  Intercept     4.6603246           .1049212       44.417383      <.001
  LOGAREA        .5278959           .0473917       11.138996      <.001
  ------------------------------------------------------------------------
  R-Square = 0.4981          Adjusted R-Square = 0.4941

  Analysis of Variance to Test Regression Relation

  Source        Sum of Sqs       df  Mean Sq          F          p-value
  ------------------------------------------------------------------------
  Regression    111.21284         1  111.21284    124.07723      <.001
  Error         112.03993       125   .8963195
  ------------------------------------------------------------------------
  Total         223.25277       126

  A low p-value suggests that the dependent variable LOGHEIGHT
  may be linearly related to independent variable(s).


  ------------------------------------------------------------------------
  MEAN X =       1.326    S.D. X =         1.78    CORR XSS =      399.079
  MEAN Y =       5.36     S.D. Y =        1.331    CORR YSS =      223.252
  REGRESSION MS=     111.213              RESIDUAL MS=        .896
  ------------------------------------------------------------------------


  Pearson's r (Correlation Coefficient)= 0.7058

  The linear regression equation is:
       LOGHEIGHT =  4.660325  +  .5278959 * LOGAREA

  Test of hypothesis to determine significance of relationship:
       H(null): Slope = 0   or  H(null): r = 0    (two-tailed test)
       t = 11.14   with   125 degrees of freedom   p <= .001

       Note: A low p-value implies that the slope does not = 0.
```

FM Closures