GRAPH:~KGRAPH.TMP

WINKS 4.65 January 10,2002

Descriptive Statistics D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\SAD.DBF

Variable Name is AREA

N	= 58	Missing or Deleted	= 0
Mean	= 3.76724	St. Dev (n-1)	= 5.46256
Median	= 1.25	St. Dev (n)	= 5.41527
Minimum	= 0.25	S.E.M.	= 0.71727
Maximum	= 23.25	Variance	= 29.83961
Sum	= 218.50	Coef. Var.	= 1.45002

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 = 1.25
10.0%	= 0.25		Fourth = 3.50
25.0%	= 0.75	Quartile	Maximum = 23.25
50.0%	= 1.25	Median	
75.0%	= 3.6875	Quartile	
90.0%	= 10.84999		
97.5%	= 21.825		
99.5%	= 23.25		Test for normality results:
100.0%	= 23.25	Maximum	D = .281 p <= 0.001

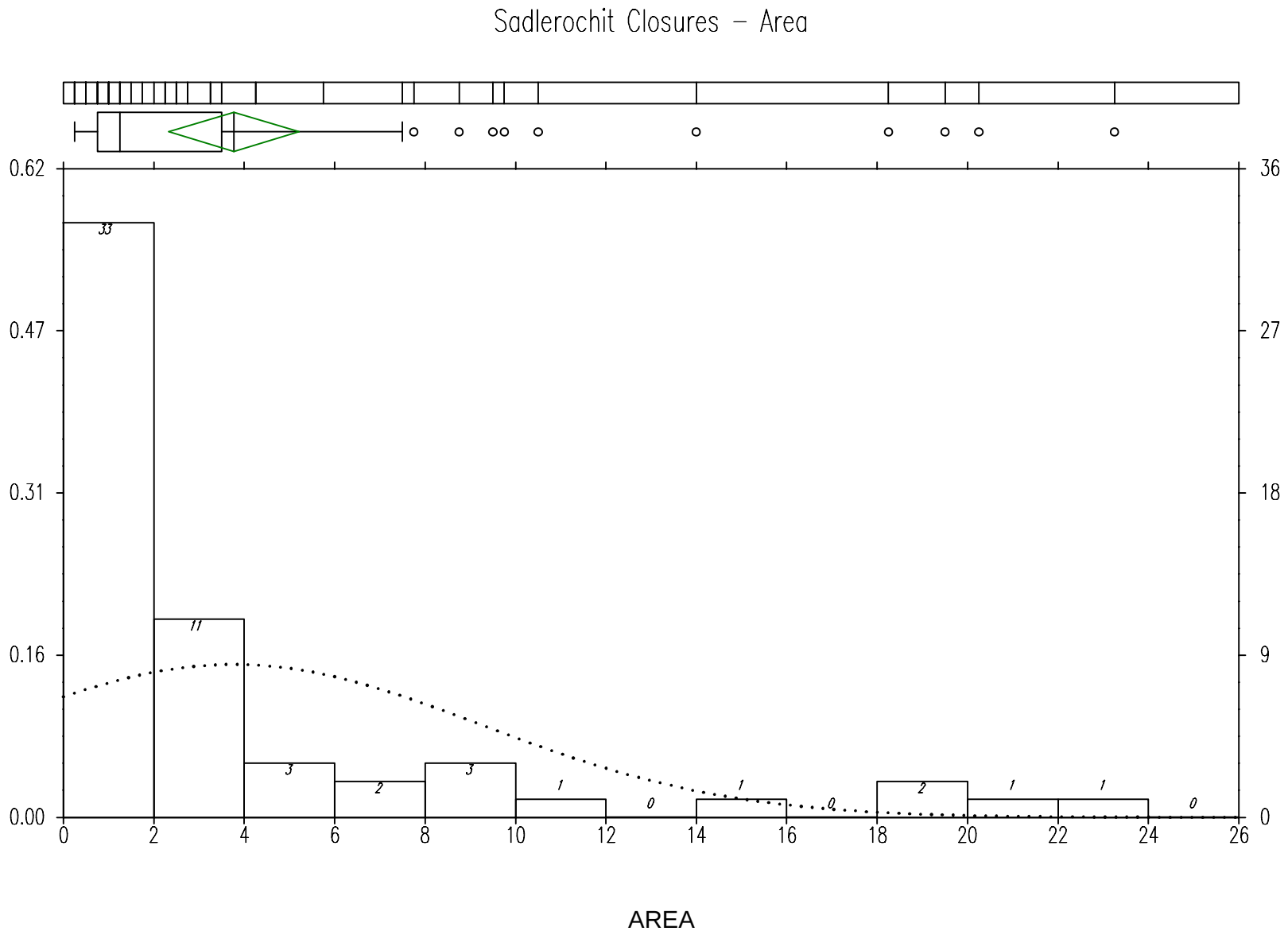
Five number summary was calculated using the technique from UNDERSTANDING ROBUST AND EXPLORATORY DATA ANALYSIS by Hoaglin, Mosteller And Tukey. See complete reference in WINKS manual.

Confidence Intervals about the mean:

---

80 % C.I. based on a t(57) critical value of 1.3 is (2.83479, 4.69969)
90 % C.I. based on a t(57) critical value of 1.68 is (2.56223, 4.97225)
95 % C.I. based on a t(57) critical value of 2.01 is (2.32553, 5.20895)
98 % C.I. based on a t(57) critical value of 2.4 is (2.04579, 5.48869)
99 % C.I. based on a t(57) critical value of 2.67 is (1.85213, 5.68235)

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.


Sadlerochit Closures – Area
0.62
0.47
0.31
0.16
0.00
36
27
18
9
0
33
11
3
2
3
1
0
1
0
2
1
1
0
0
2
4
6
8
10
12
14
16
18
20
22
24
26
AREA

GRAPH:~KGRAPH.TMP

WINKS 4.65 January 10,2002

Descriptive Statistics D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\SAD.DBF

Variable Name is HEIGHT

N	= 58	Missing or Deleted	= 0
Mean	= 41.65345	St. Dev (n-1)	= 34.49709
Median	= 31.10	St. Dev (n)	= 34.19841
Minimum	= 5.00	S.E.M.	= 4.52969
Maximum	= 220.90	Variance	= 1190.04917
Sum	= 2415.89999	Coef. Var.	= 0.82819

Percentiles:

0.0%	= 5.00	Minimum
0.5%	= 5.00	
2.5%	= 5.2375	
10.0%	= 10.99	
25.0%	= 20.775	Quartile
50.0%	= 31.10	Median
75.0%	= 53.65	Quartile
90.0%	= 78.50999	
97.5%	= 169.0777	
99.5%	= 220.90	
100.0%	= 220.90	Maximum

Tukey Five Number Summary:

Minimum	= 5.00
Fourth	= 21.00
Median	= 31.10
Fourth	= 52.20
Maximum	= 220.90

Test for normality results:
D = .177 p <= 0.001

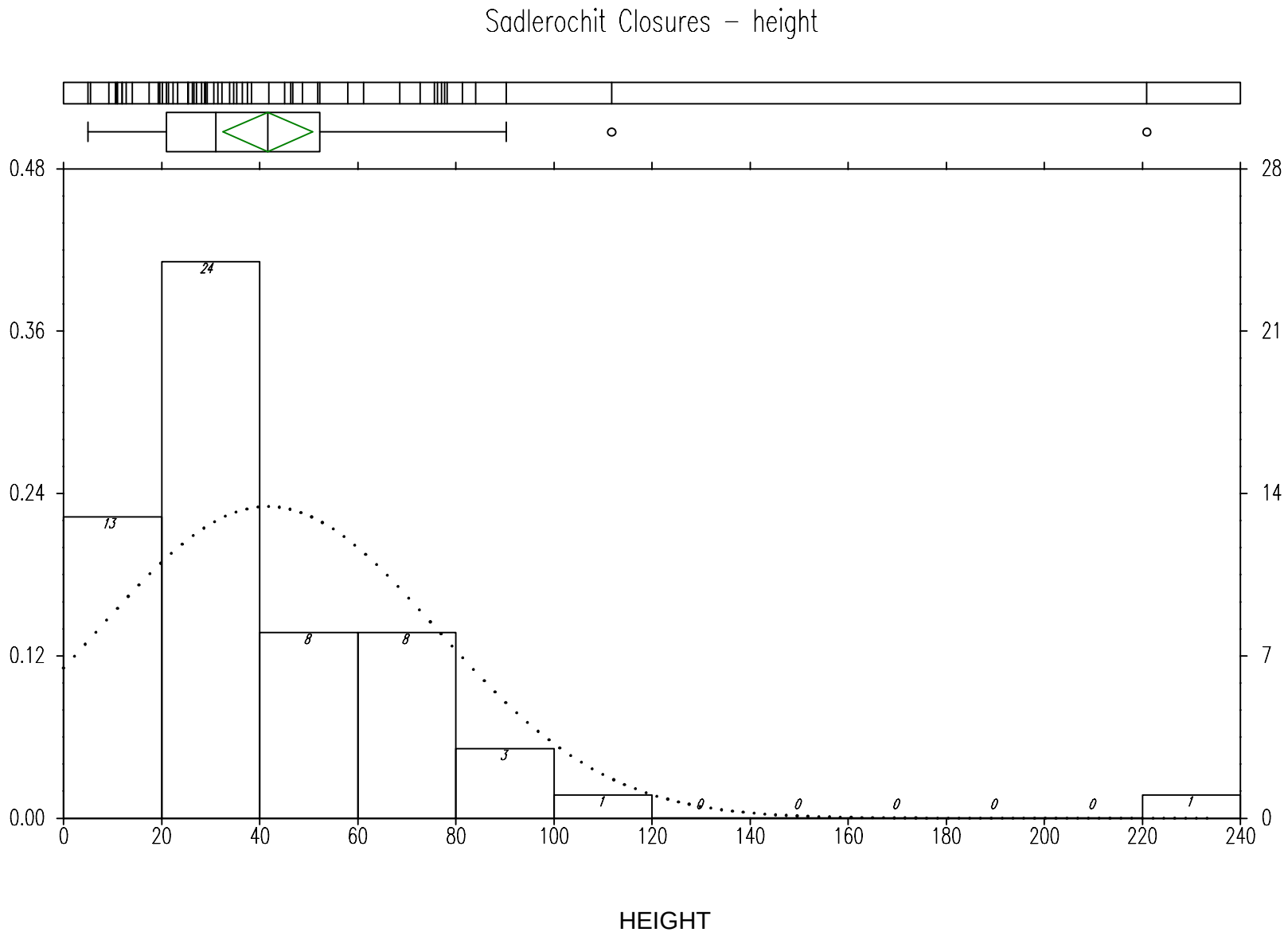
Five number summary was calculated using the technique from UNDERSTANDING ROBUST AND EXPLORATORY DATA ANALYSIS by Hoaglin, Mosteller And Tukey. See complete reference in WINKS manual.

Confidence Intervals about the mean:

---

80 % C.I. based on a t(57) critical value of 1.3 is (35.76485, 47.54204)
90 % C.I. based on a t(57) critical value of 1.68 is (34.04357, 49.26333)
95 % C.I. based on a t(57) critical value of 2.01 is (32.54877, 50.75812)
98 % C.I. based on a t(57) critical value of 2.4 is (30.78219, 52.5247)
99 % C.I. based on a t(57) critical value of 2.67 is (29.55918, 53.74772)

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.


Sadlerochit Closures – height
0.48
0.36
0.24
0.12
0.00
28
21
14
7
0
13
24
8
8
3
1
0
0
0
0
0
1
0
20
40
60
80
100
120
140
160
180
200
220
240
HEIGHT

GRAPH:~KGRAPH.TMP

WINKS 4.65 January 10,2002

Linear Regression and Correlation

D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\SAD.DBF

Dependent variable is HEIGHT, 1 independent variables, 58 cases.

Variable	Coefficient	St. Error	t-value	p(2 tail)
Intercept	24.701445	3.9059719	6.3240203	<.001
AREA	4.4998451	.5921046	7.5997469	<.001

R-Square = 0.5077 Adjusted R-Square = 0.4989

Analysis of Variance to Test Regression Relation

Source	Sum of Sqs	df	Mean Sq	F	p-value
Regression	34439.998	1	34439.998	57.756153	<.001
Error	33392.804	56	596.30008		
Total	67832.803	57			

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

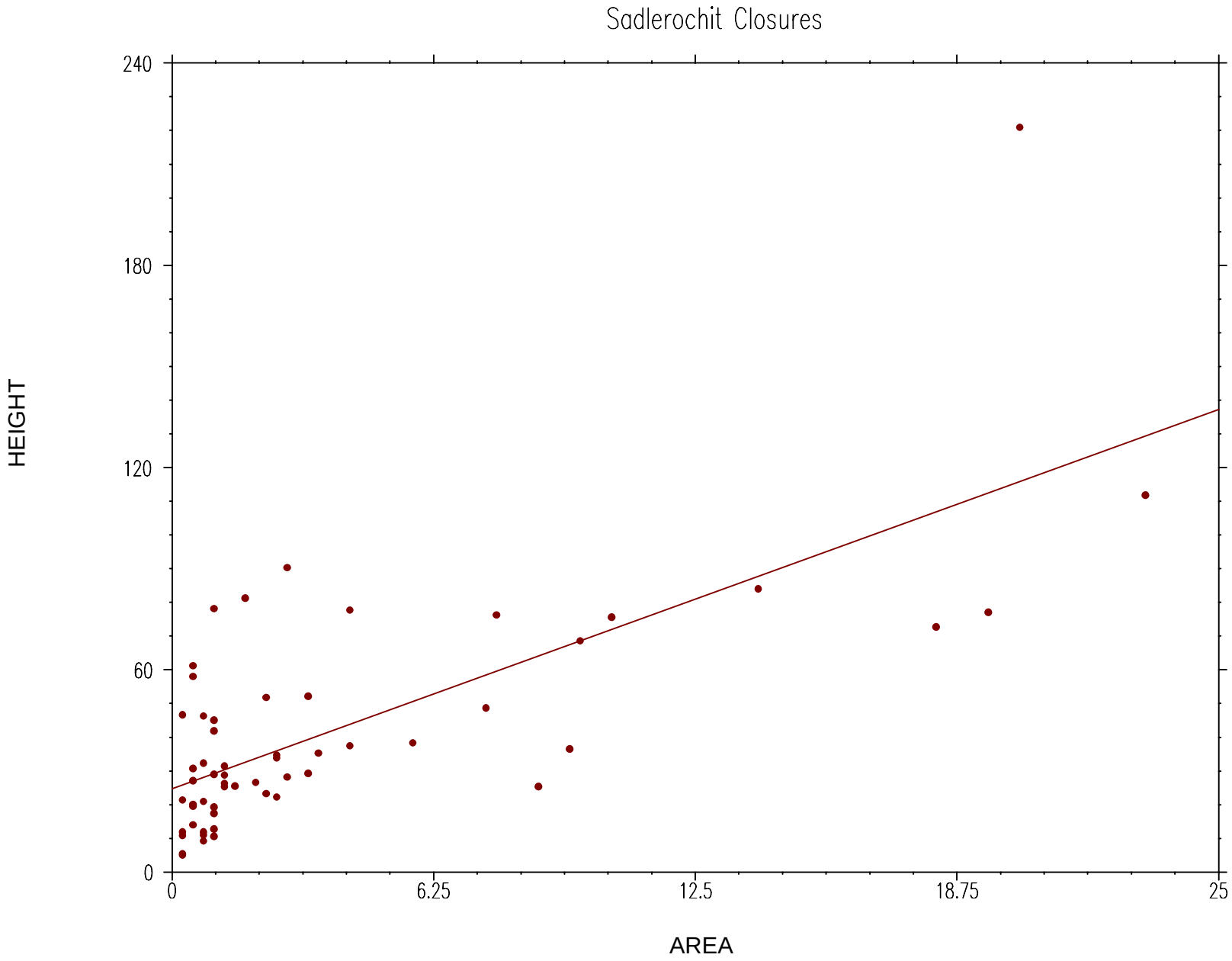
MEAN X = 3.767 S.D. X = 5.463 CORR XSS = 1700.858
MEAN Y = 41.653 S.D. Y = 34.497 CORR YSS = 67832.76
REGRESSION MS= 34439.998 RESIDUAL MS= 596.3

Pearson's r (Correlation Coefficient)= 0.7125

The linear regression equation is:
HEIGHT = 24.70144 + 4.499845 * AREA

Test of hypothesis to determine significance of relationship:
H(null): Slope = 0 or H(null): r = 0 (two-tailed test)
t = 7.6 with 56 degrees of freedom p <= .001

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


Sadlerochit Closures
240
180
120
60
0
HEIGHT
0
6.25
12.5
18.75
25
AREA

WINKS 4.65 January 10,2002

Correlation Coefficients D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\SAD.DBF

Variables used : AREA and HEIGHT

Number of cases used: 58

Pearson's r (Correlations Coefficient) = 0.7125 R-Square = 0.5077

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

(Pearson's) t = 7.599747 with 56 d.f. p < 0.001
(A low p-value implies that the slope does not = 0.)

Spearman's Rank Correlation Coefficient = 0.6257

(Spearman's) t = 6.002323 with 56 d.f. p < 0.001

GRAPH:~KGRAPH.TMP

WINKS 4.65 January 10,2002

Linear Regression and Correlation
D:\PROJECTS\NPRA\TOPSRE~1\WINKST~1\SAD.DBF

Dependent variable is LOGHEIGHT, 1 independent variables, 58 cases.

Variable	Coefficient	St. Error	t-value	p(2 tail)
Intercept	3.2520448	.0795531	40.878902	<.001
LOGAREA	.4043018	.0588334	6.8719743	<.001

R-Square = 0.4575 Adjusted R-Square = 0.4478

Analysis of Variance to Test Regression Relation

Source	Sum of Sqs	df	Mean Sq	F	p-value
Regression	14.784281	1	14.784281	47.224031	<.001
Error	17.531746	56	.3130669		
Total	32.316027	57			

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

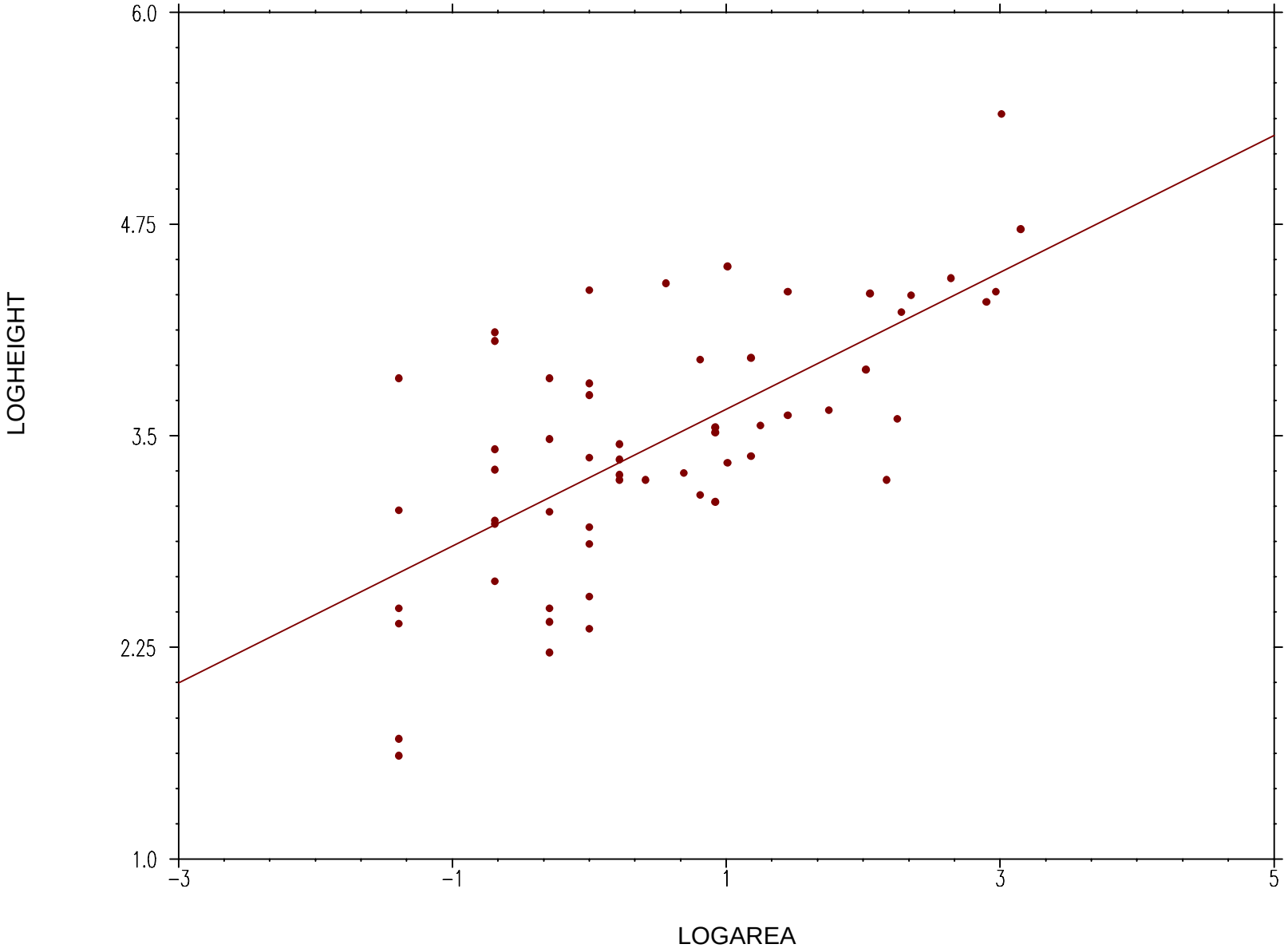
MEAN X = .519 S.D. X = 1.26 CORR XSS = 90.446
MEAN Y = 3.462 S.D. Y = .753 CORR YSS = 32.316
REGRESSION MS= 14.784 RESIDUAL MS= .313

Pearson's r (Correlation Coefficient)= 0.6764

The linear regression equation is:
LOGHEIGHT = 3.252045 + .4043018 * LOGAREA

Test of hypothesis to determine significance of relationship:
H(null): Slope = 0 or H(null): r = 0 (two-tailed test)
t = 6.87 with 56 degrees of freedom p <= .001

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


6.0
4.75
3.5
2.25
1.0
LOGHEIGHT
−3
−1
1
3
5
LOGAREA