Descriptive Statistics for Bumblebee Bat Weights

The MEANS Procedure

Analysis Variable : weight					
N	Mean	Std Dev	Std Error	t Value	Pr > |t|
15	1.6466667	0.2531704	0.0653683	25.19	<.0001

Normality Analysis of Bumblebee Bat Weights

The UNIVARIATE Procedure
Variable: weight

Moments			
N	15	Sum Weights	15
Mean	1.64666667	Sum Observations	24.7
Std Deviation	0.25317037	Variance	0.06409524
Skewness	1.09630411	Kurtosis	2.72573796
Uncorrected SS	41.57	Corrected SS	0.89733333
Coeff Variation	15.374719	Std Error Mean	0.06536831

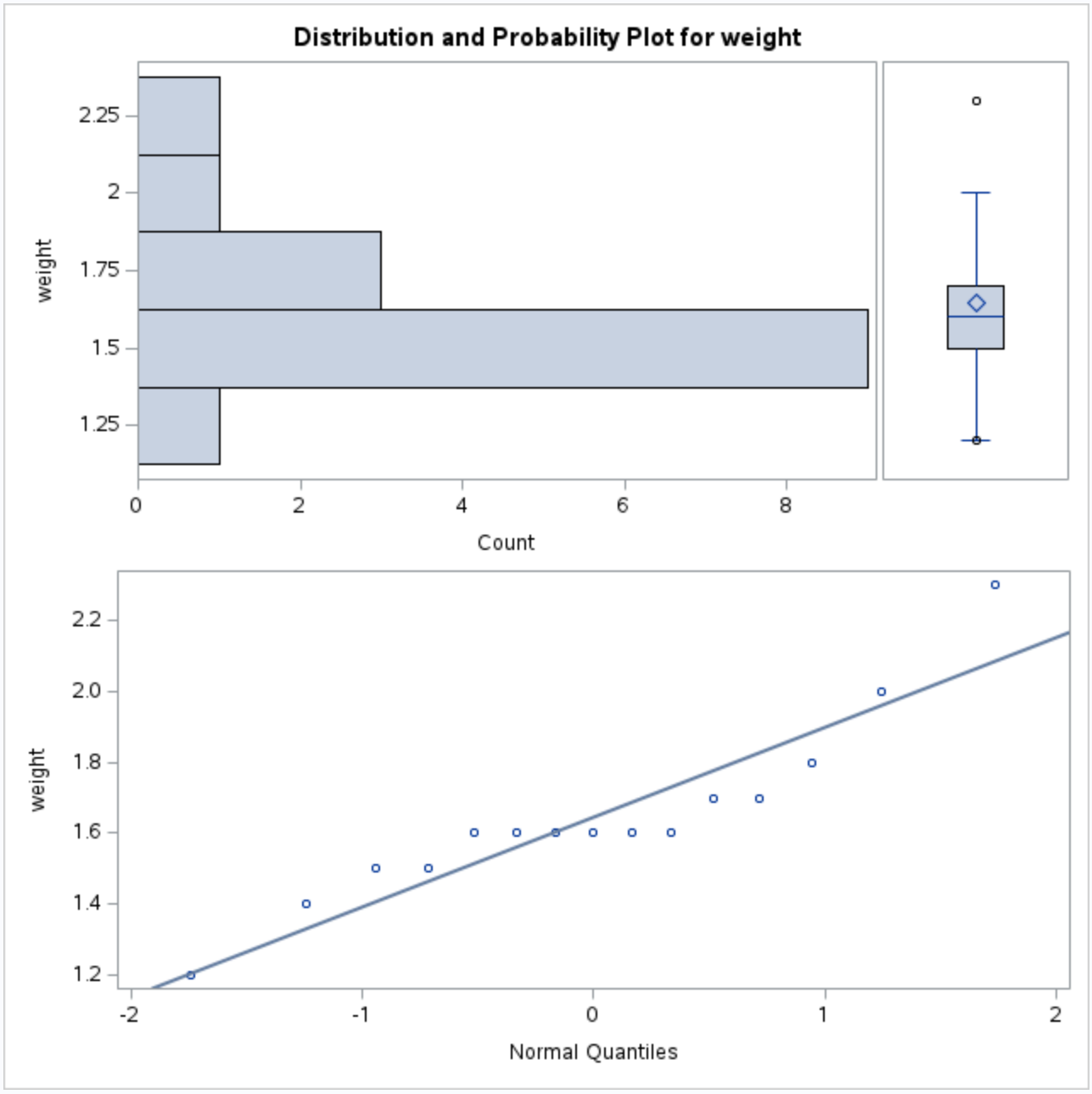
Basic Statistical Measures			
Location		Variability	
Mean	1.646667	Std Deviation	0.25317
Median	1.600000	Variance	0.06410
Mode	1.600000	Range	1.10000
		Interquartile Range	0.20000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	25.1906	Pr > |t|	<.0001
Sign	M	7.5	Pr >= |M|	<.0001
Signed Rank	S	60	Pr >= |S|	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.884372	Pr < W	0.0552
Kolmogorov-Smirnov	D	0.239789	Pr > D	0.0205
Cramer-von Mises	W-Sq	0.17198	Pr > W-Sq	0.0101
Anderson-Darling	A-Sq	0.875499	Pr > A-Sq	0.0199

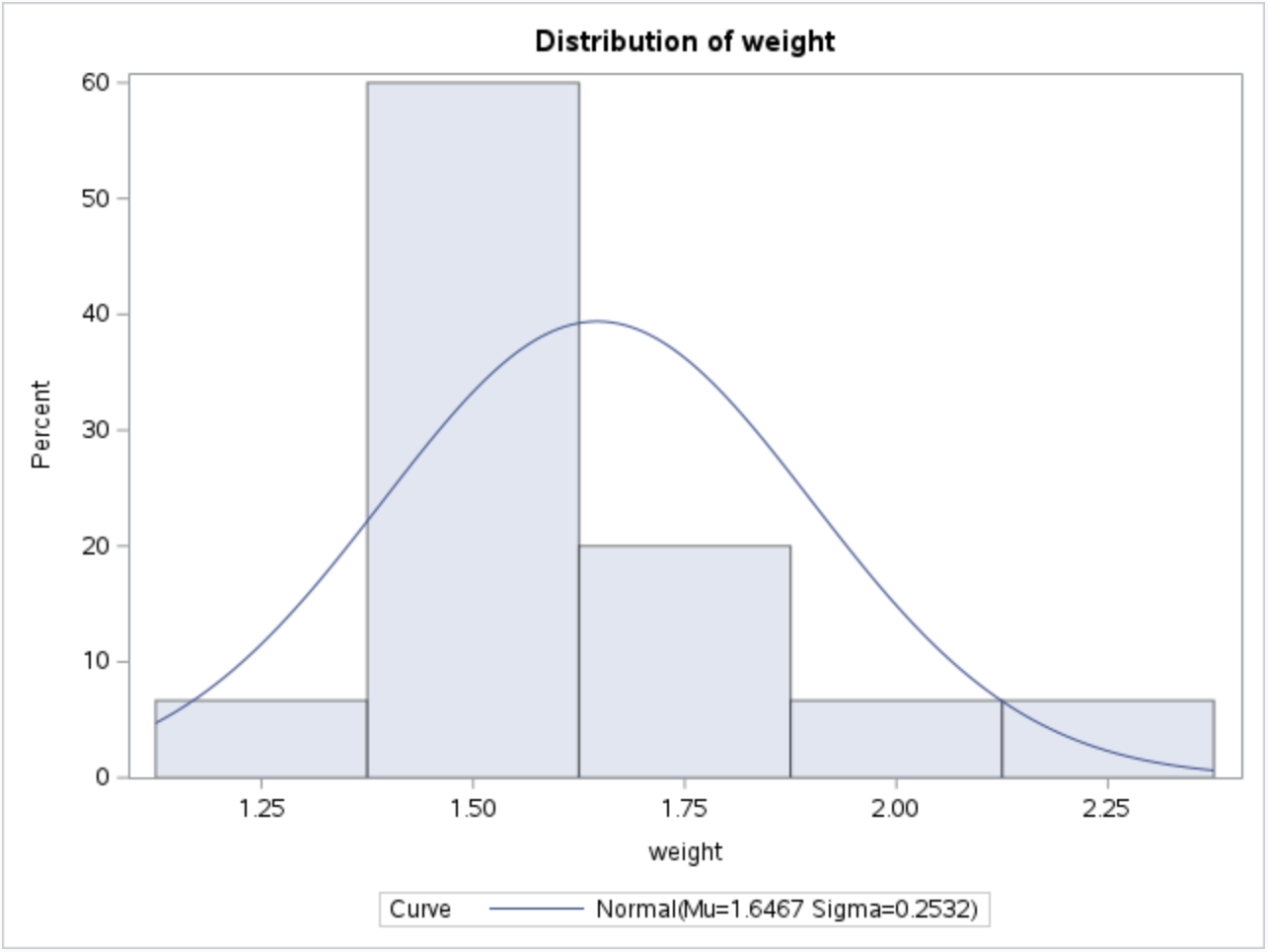
Quantiles (Definition 5)	
Level	Quantile
100% Max	2.3
99%	2.3
95%	2.3
90%	2.0
75% Q3	1.7
50% Median	1.6
25% Q1	1.5
10%	1.4
5%	1.2
1%	1.2
0% Min	1.2

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1.2	11	1.7	1
1.4	12	1.7	10
1.5	9	1.8	8
1.5	3	2.0	4
1.6	15	2.3	5



Normality Analysis of Bumblebee Bat Weights

The UNIVARIATE Procedure



Normality Analysis of Bumblebee Bat Weights

The UNIVARIATE Procedure
Fitted Normal Distribution for weight

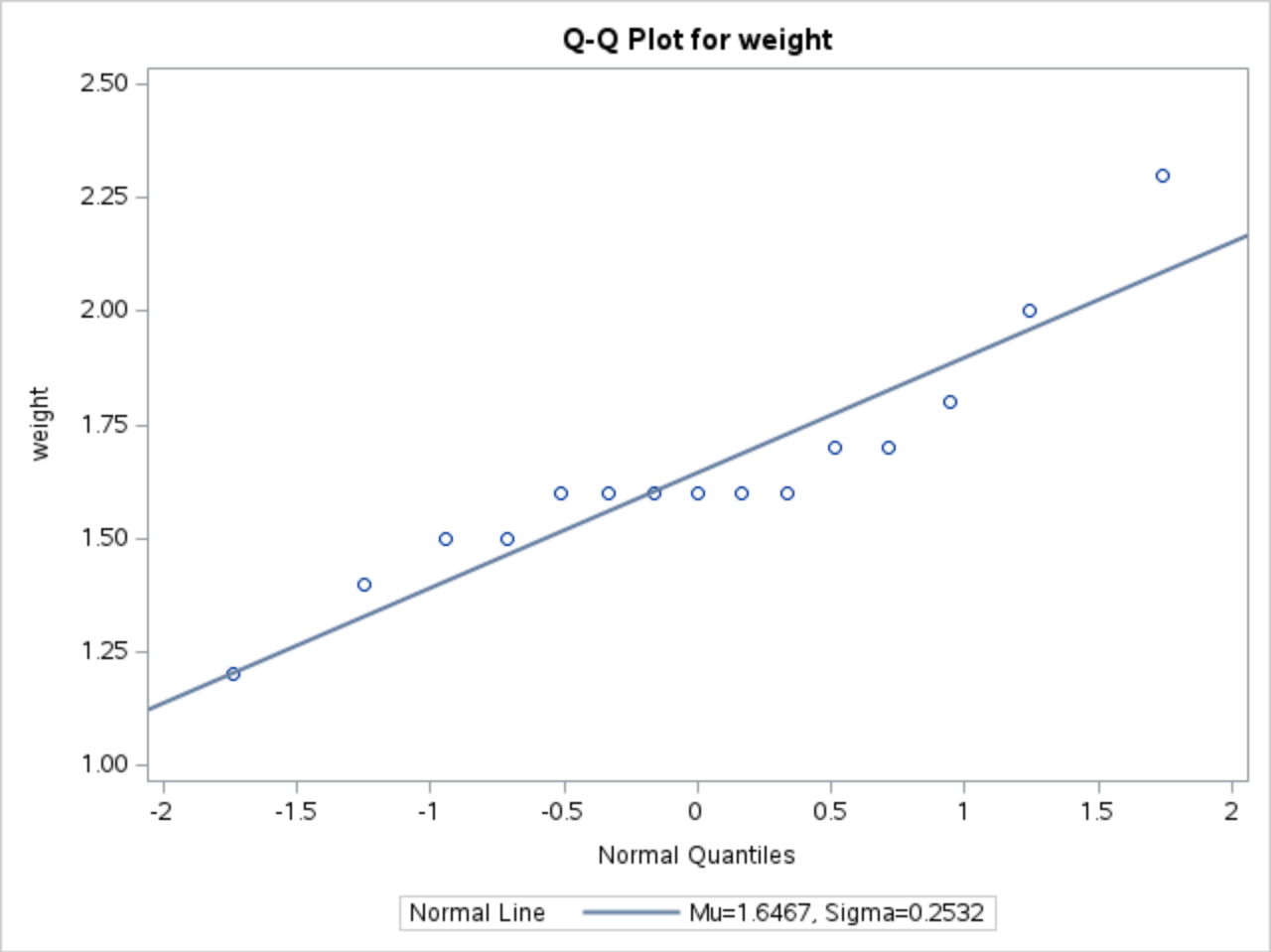
Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	1.646667
Std Dev	Sigma	0.25317

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.23978902	**Pr > D**	0.021
Cramer-von Mises	**W-Sq**	0.17197960	**Pr > W-Sq**	0.010
Anderson-Darling	**A-Sq**	0.87549869	**Pr > A-Sq**	0.020

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	1.20000	1.05770
5.0	1.20000	1.23024
10.0	1.40000	1.32222
25.0	1.50000	1.47591
50.0	1.60000	1.64667
75.0	1.70000	1.81743
90.0	2.00000	1.97112
95.0	2.30000	2.06309
99.0	2.30000	2.23563

Normality Analysis of Bumblebee Bat Weights

The UNIVARIATE Procedure



One-Sample t-Test for Bumblebee Bat Weights

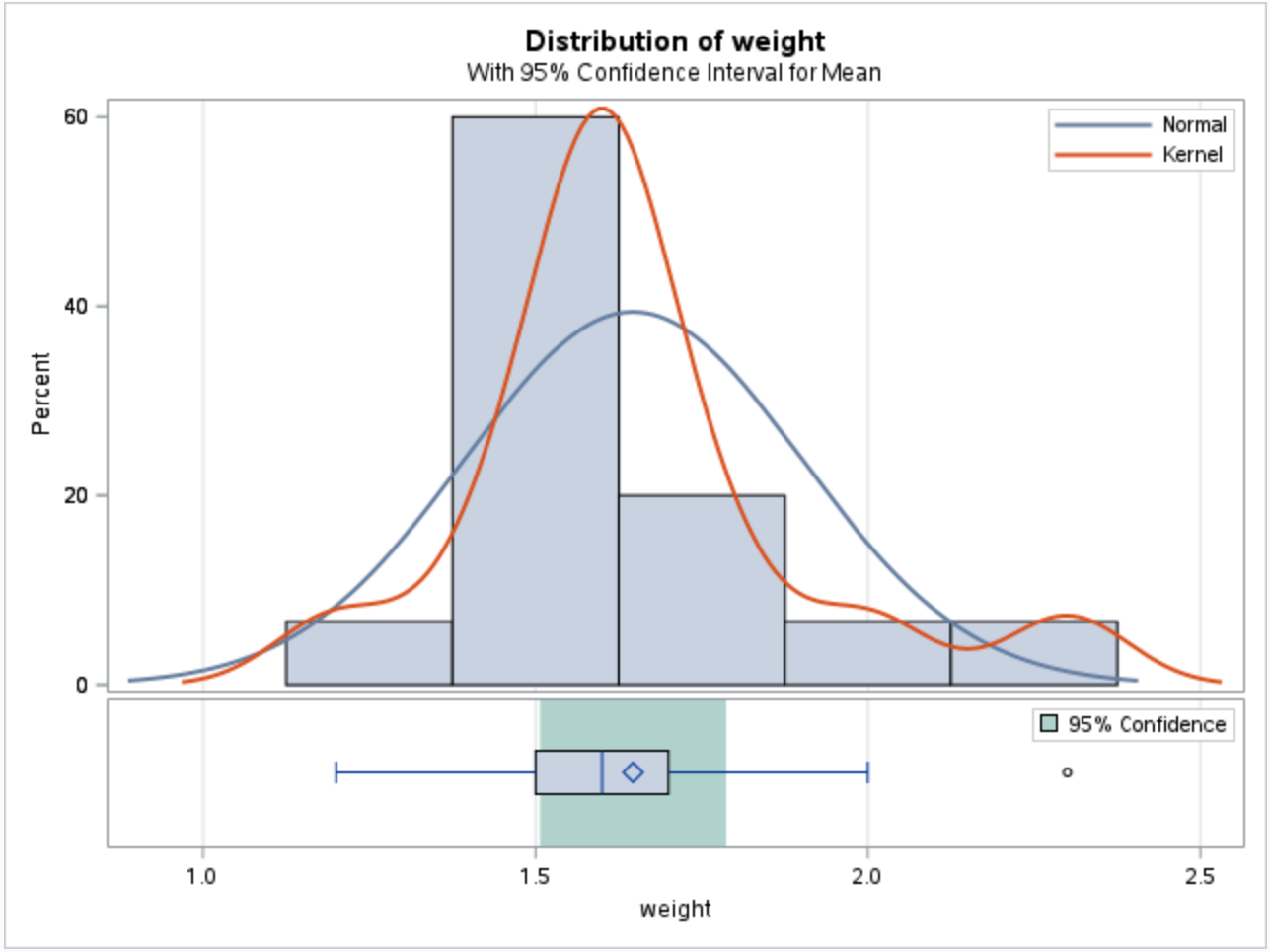
The TTEST Procedure

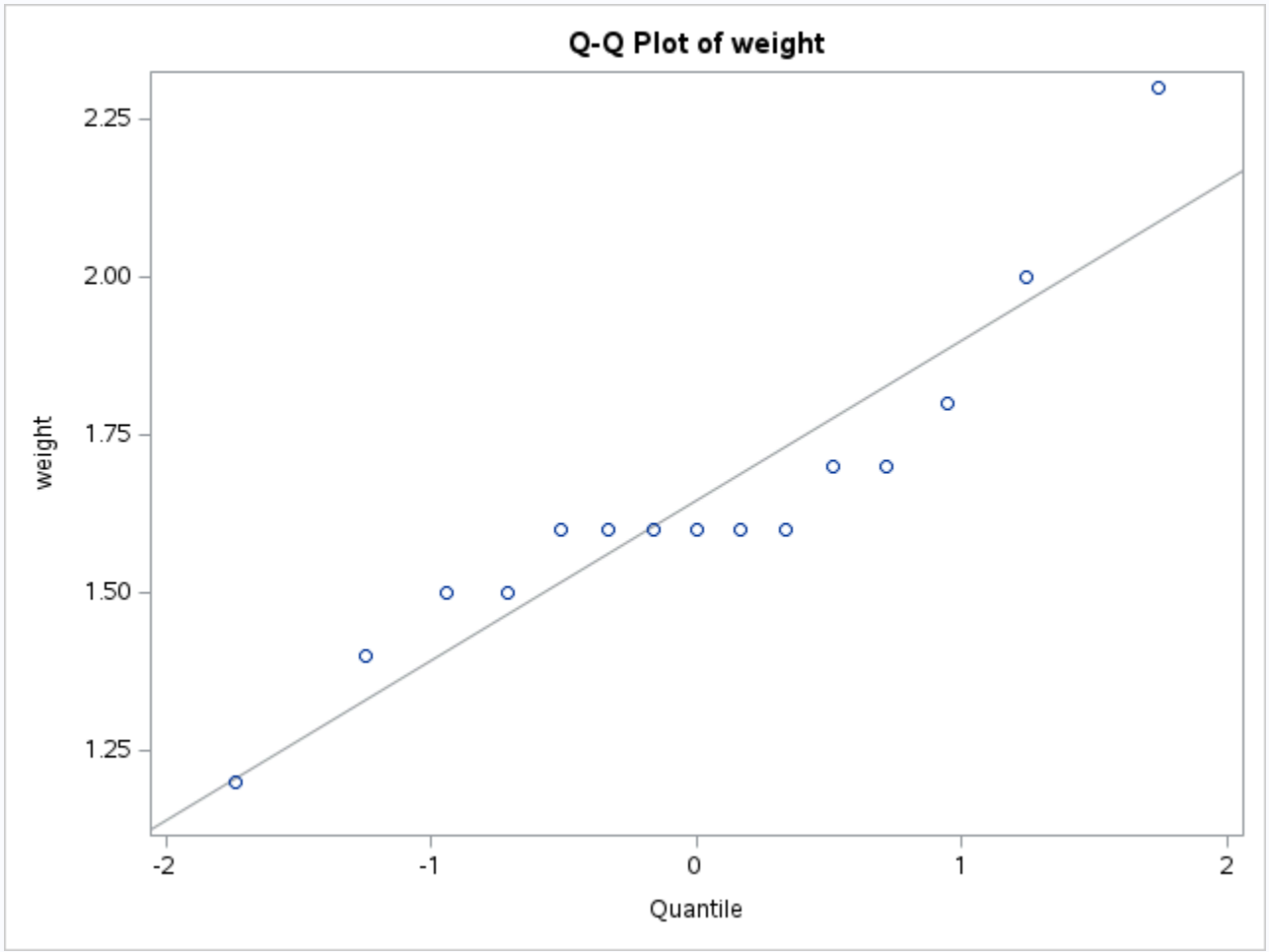
Variable: weight

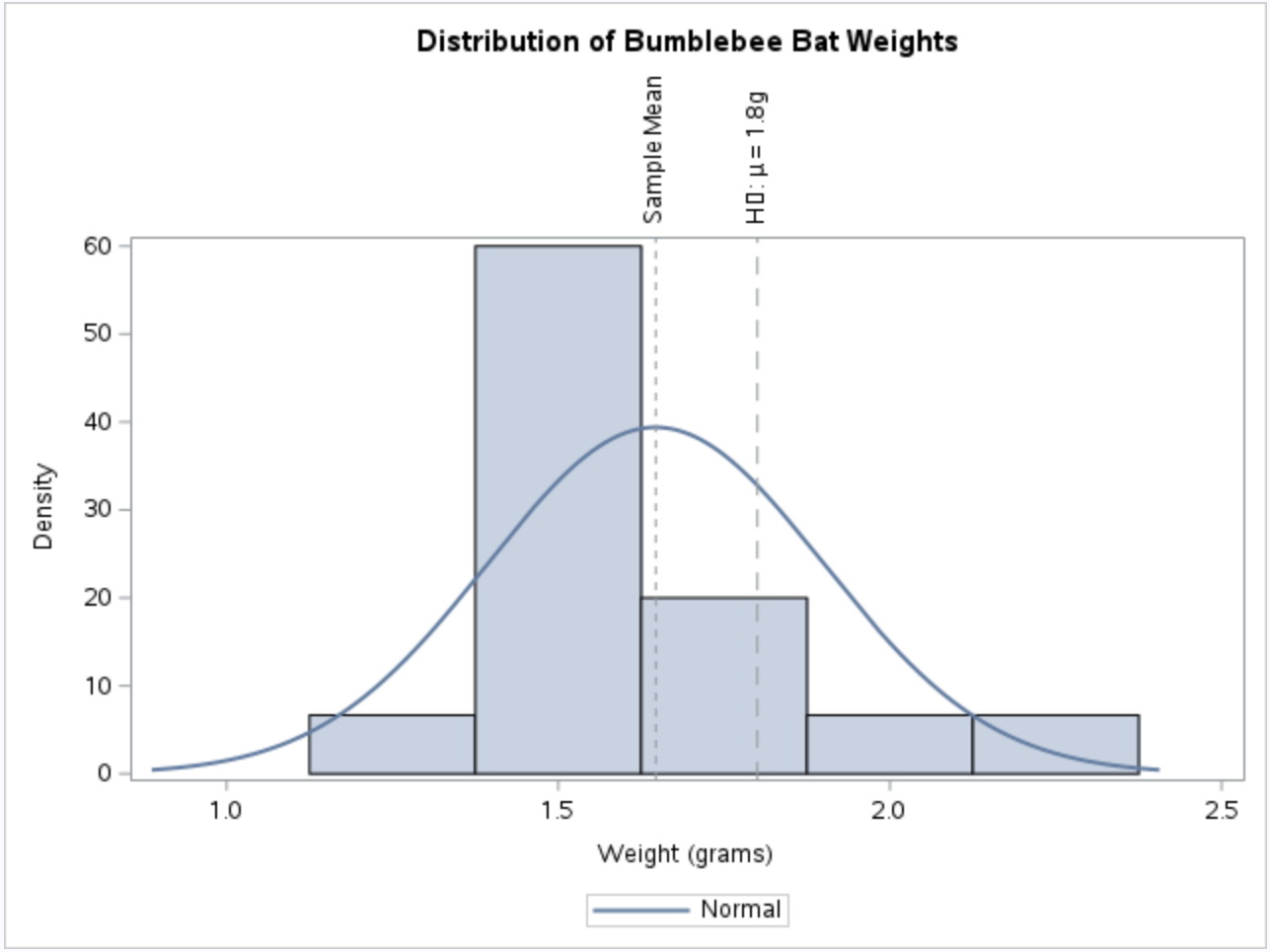
N	Mean	Std Dev	Std Err	Minimum	Maximum
15	1.6467	0.2532	0.0654	1.2000	2.3000

Mean	95% CL Mean		Std Dev	95% CL Std Dev	
1.6467	1.5065	1.7869	0.2532	0.1854	0.3993

DF	t Value	Pr > |t|
14	-2.35	0.0342


Distribution of weight
With 95% Confidence Interval for Mean
Normal
Kernel
Percent
60
40
20
0
95% Confidence
1.0
1.5
2.0
2.5
weight


Q-Q Plot of weight
weight
2.25
2.00
1.75
1.50
1.25
-2
-1
0
1
2
Quantile


Distribution of Bumblebee Bat Weights
Sample Mean
H0: μ = 1.8g
60
50
40
30
20
10
0
Density
1.0
1.5
2.0
2.5
Weight (grams)
Normal