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/* SAS program to generate 100 sets of 30 at- */
/* bats for a baseball player with a .260 */
/* batting average, using the binomial model. */

```

```

options nocenter ls=72;
data batting;
  do i=1 to 100;
    y=ranbin(0,30,.260);
    batave=y/30;
    output;
  end;
proc univariate plot normal data=batting;
  var batave;
run;

```

The UNIVARIATE Procedure
Variable: batave

Moments

N	100	Sum Weights	100
Mean	0.25833333	Sum Observations	25.8333333
Std Deviation	0.07571211	Variance	0.00573232
Skewness	0.29521149	Kurtosis	0.0764932
Uncorrected SS	7.24111111	Corrected SS	0.5675
Coeff Variation	29.3079126	Std Error Mean	0.00757121

Basic Statistical Measures

Location		Variability	
Mean	0.258333	Std Deviation	0.07571
Median	0.266667	Variance	0.00573
Mode	0.233333	Range	0.36667
		Interquartile Range	0.10000

NOTE: The mode displayed is the smallest of 2 modes with a count of 18.

Tests for Location: Mu0=0

Test	-Statistic-	-----p Value-----	
Student's t	t 34.12048	Pr > t	<.0001
Sign	M 50	Pr >= M	<.0001
Signed Rank	S 2525	Pr >= S	<.0001

Tests for Normality

Test	--Statistic--		-----p Value-----	
Shapiro-Wilk	W	0.974468	Pr < W	0.0490
Kolmogorov-Smirnov	D	0.106178	Pr > D	<0.0100
Cramer-von Mises	W-Sq	0.181054	Pr > W-Sq	0.0091
Anderson-Darling	A-Sq	0.99327	Pr > A-Sq	0.0132

Quantiles (Definition 5)

Quantile	Estimate
100% Max	0.466667
99%	0.450000
95%	0.400000
90%	0.366667
75% Q3	0.300000
50% Median	0.266667
25% Q1	0.200000
10%	0.166667
5%	0.133333
1%	0.100000
0% Min	0.100000

Extreme Observations

-----Lowest-----		-----Highest-----	
Value	Obs	Value	Obs
0.100000	88	0.400000	81
0.100000	75	0.400000	96
0.100000	38	0.433333	24
0.133333	69	0.433333	46
0.133333	68	0.466667	86

Variable: batave

Stem Leaf	#	Boxplot
46 7	1	0
44		
42 33	2	
40 0000	4	
38		
36 7777	4	
34		
32 33333333	8	
30 0000000000000000	16	+-----+
28		
26 7777777777777777	18	*-----*
24		+
22 3333333333333333	18	
20 00000000000000	13	+-----+
18		
16 7777777777	10	
14		
12 333	3	
10 000	3	

Multiply Stem.Leaf by 10**⁻²

