NPar Tests

[DataSet1] C:\Users\Erika\egyetem\oktatas\aktualis\2024-25 tanev\statisztika2\gyakorlatok\statisztika2_gyak08\01ermedobas.sav

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
kis_minta	Group 1	Fej	2	,20	,50	,109
	Group 2	Iras	8	,80		
	Total		10	1,00		
nagy_minta	Group 1	Fej	219	,55	,50	,064
	Group 2	Iras	181	,45		
	Total		400	1,00		

NPar Tests

[DataSet2] C:\Users\Erika\egyetem\oktatas\aktualis\2024-25 tanev\statisztika2\gyakorlatok\statisztika2_gyak08\02mozi.sav

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
jegyek	Group 1	<= 300	5	,63	,50	,727
	Group 2	> 300	3	,38		
	Total		8	1,00		

NPar Tests

[DataSet3] C:\Users\Erika\egyetem\oktatas\aktualis\2024-25 tanev\statisztika2\gyakorlatok\statisztika2_gyak08\05ebresztes.sav

Runs Test

	ebresztes_num
Test Value[a]	1,5123
Cases < Test Value	178
Cases >= Test Value	187
Total Cases	365
Number of Runs	183
Z	-,041
Asymp. Sig. (2-tailed)	,967

a. Mean

Runs Test 2

	ebresztes_num
Test Value[a]	1,5000
Total Cases	365
Number of Runs	183
Z	-,041
Asymp. Sig. (2-tailed)	,967

a. User-specified.

NPar Tests

```
[DataSet4] C:\Users\Erika\egyetem\oktatas\aktualis\2024-25 tanev\statisztika2\gyakorlatok\statisztika2_gyak08\06menetido.sav
```

Kruskal-Wallis Test

Ranks

	nap	N	Mean Rank
menetido	hétfő	5	12,90
	szerda	5	4,70
	péntek	5	6,40
	Total	15	

Test Statistics[a,b]

	menetido
Kruskal-Wallis H	9,484
df	2
Asymp. Sig.	,009

a. Kruskal Wallis Test

b. Grouping Variable: nap

NPar Tests

Mann-Whitney Test

Ranks

	nap	N	Mean Rank	Sum of Ranks
menetido	hétfő	5	7,90	39,50
	péntek	5	3,10	15,50
	Total	10		

Test Statistics[a]

	menetido
Mann-Whitney U	,500
Wilcoxon W	15,500
Z	-2,522
Asymp. Sig. (2-tailed)	,012
Exact Sig. [2*(1-tailed Sig.)]	,008[b]

a. Grouping Variable: nap

b. Not corrected for ties.

NPar Tests

```
[DataSet5] C:\Users\Erika\egyetem\oktatas\aktualis\2024-25 tanev\statisztika2\gyakorlatok\statisztika2_gyak08\07Piac_mandarin.sav
```

Mann-Whitney Test

Ranks

	Piac	N	Mean Rank	Sum of Ranks
mandarin_ar	Nagycsarnok	10	10,50	105,00
	Lehel téri csarnok	10	10,50	105,00
	Total	20		

Test Statistics[a]

	mandarin_ar
Mann-Whitney U	50,000
Wilcoxon W	105,000
Z	,000
Asymp. Sig. (2-tailed)	1,000
Exact Sig. [2*(1-tailed Sig.)]	1,000[b]

a. Grouping Variable: Piac

b. Not corrected for ties.

Two-Sample Kolmogorov-Smirnov Test

Frequencies

	Piac	N
mandarin_ar	Nagycsarnok	10
	Lehel téri csarnok	10
	Total	20

Test Statistics[a]

		mandarin_ar
Most Extreme Differences	Absolute	,200
	Positive	,200
	Negative	-,200
Kolmogorov-Smirnov Z		,447
Asymp. Sig. (2-tailed)		,988

a. Grouping Variable: Piac

Wald-Wolfowitz Test

Frequencies

	Piac	N
mandarin_ar	Nagycsarnok	10
	Lehel téri csarnok	10
	Total	20

Test Statistics[a,b]

		Number of Runs	Z	Exact Sig. (1-tailed)
mandarin_ar	Minimum Possible	10[c]	-,230	,414
	Maximum Possible	14[c]	1,608	,949

a. Wald-Wolfowitz Test

b. Grouping Variable: Piac

c. There are 3 inter-group ties involving 7 cases.

```
Data written to the working file.
6 variables and 1000 cases written.
Variable: Aminta10 Type: Number Format : F6.3 One or more values were set to
system-missing.
Variable: Aminta100 Type: Number Format : F6.3 One or more values were set to
system-missing.
Variable: Aminta1000 Type: Number Format : F6.3
Variable: Bminta10 Type: Number Format : F5.3 One or more values were set to
system-missing.
Variable: Bminta100 Type: Number Format : F5.3 One or more values were set to
system-missing.
Variable: Bminta1000 Type: Number Format : F5.3

Substitute the following to build syntax for these data.
/VARIABLES=
Aminta10 F6.3
Aminta100 F6.3
Aminta1000 F6.3
```

```
Bminta10 F5.3
Bminta100 F5.3
Bminta1000 F5.3
```

NPar Tests

```
[DataSet6]
```

One-Sample Kolmogorov-Smirnov Test

			Aminta10	Aminta100
N			10	100
Normal Parameters[a,b]	Mean		,24930	-,03024
	Std. Deviation		1,191917	1,046400
Most Extreme Differences	Absolute		,136	,069
	Positive		,133	,069
	Negative		-,136	-,037
Test Statistic			,136	,069
Asymp. Sig. (2-tailed)[c]			,200[d]	,200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		,863	,275
	99% Confidence Interval	Lower Bound	,854	,264
		Upper Bound	,872	,287

One-Sample Kolmogorov-Smirnov Test

			Aminta1000	Bminta10
N			1000	10
Normal Parameters[a,b]	Mean		,03751	,52790
	Std. Deviation		,995928	,268839
Most Extreme Differences	Absolute		,016	,196
	Positive		,016	,160
	Negative		-,012	-,196
Test Statistic			,016	,196
Asymp. Sig. (2-tailed)[c]			,200[d]	,200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		,770	,336
	99% Confidence Interval	Lower Bound	,759	,324
		Upper Bound	,781	,348

One-Sample Kolmogorov-Smirnov Test

			Bminta100	Bminta1000
N			100	1000
Normal Parameters[a,b]	Mean		,48551	,50221
	Std. Deviation		,274905	,283219
Most Extreme Differences	Absolute		,062	,065
	Positive		,062	,065
	Negative		-,059	-,060
Test Statistic			,062	,065
Asymp. Sig. (2-tailed)[c]			,200[d]	<,001
Monte Carlo Sig. (2-tailed)[e]	Sig.		,458	<,001
	99% Confidence Interval	Lower Bound	,445	,000
		Upper Bound	,471	,000

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

One-Sample Kolmogorov-Smirnov Test 2

			Aminta10	Aminta100
N			10	100
Uniform Parameters[a,b]	Minimum		-1,945	-2,253
	Maximum		2,010	3,570
Most Extreme Differences	Absolute		,200	,347
	Positive		,100	,347
	Negative		-,200	-,079
Test Statistic			,200	,347
Monte Carlo Sig. (2-tailed)[c]	Sig.		,760	<,001
	99% Confidence Interval	Lower Bound	,749	,000
		Upper Bound	,771	,000

One-Sample Kolmogorov-Smirnov Test 2

			Aminta1000	Bminta10
N			1000	10
Uniform Parameters[a,b]	Minimum		-3,072	,128
	Maximum		3,466	,983
Most Extreme Differences	Absolute		,242	,230
	Positive		,242	,230
	Negative		-,182	-,129
Test Statistic			,242	,230
Monte Carlo Sig. (2-tailed)[c]	Sig.		<,001	,603
	99% Confidence Interval	Lower Bound	,000	,590
		Upper Bound	,000	,615

One-Sample Kolmogorov-Smirnov Test 2

			Bminta100	Bminta1000
N			100	1000
Uniform Parameters[a,b]	Minimum		,001	,001
	Maximum		,999	,999
Most Extreme Differences	Absolute		,080	,021
	Positive		,080	,021
	Negative		-,033	-,020
Test Statistic			,080	,021
Monte Carlo Sig. (2-tailed)[c]	Sig.		,524	,744
	99% Confidence Interval	Lower Bound	,511	,733
		Upper Bound	,537	,755

a. Test distribution is Uniform.

b. Calculated from data.

c. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

One-Sample Kolmogorov-Smirnov Test 3

			Aminta10	Aminta100
N			10[c]	100[e]
Exponential parameter.[a,b]	Mean		,81371	,74825
Most Extreme Differences	Absolute		,260	,118
	Positive		,260	,083
	Negative		-,253	-,118
Test Statistic			2444,209	1,866E+51
Monte Carlo Sig. (2-tailed)[d]	Sig.		<,001	<,001
	99% Confidence Interval	Lower Bound	,000	,000
		Upper Bound	,000	,000

One-Sample Kolmogorov-Smirnov Test 3

			Aminta1000	Bminta10
N			1000[f]	10
Exponential parameter.[a,b]	Mean		,80297	,52790
Most Extreme Differences	Absolute		,102	,247
	Positive		,039	,165
	Negative		-,102	-,247
Test Statistic			3,665E+35	,247
Monte Carlo Sig. (2-tailed)[d]	Sig.		<,001	,267
	99% Confidence Interval	Lower Bound	,000	,256
		Upper Bound	,000	,279

One-Sample Kolmogorov-Smirnov Test 3

			Bminta100	Bminta1000
N			100	1000
Exponential parameter.[a,b]	Mean		,48551	,50221
Most Extreme Differences	Absolute		,185	,170
	Positive		,128	,137
	Negative		-,185	-,170
Test Statistic			,185	,170
Monte Carlo Sig. (2-tailed)[d]	Sig.		<,001	<,001
	99% Confidence Interval	Lower Bound	,000	,000
		Upper Bound	,000	,000

a. Test Distribution is Exponential.

b. Calculated from data.

c. There are 3 values outside the specified distribution range. These values are skipped.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

e. There are 49 values outside the specified distribution range. These values are skipped.

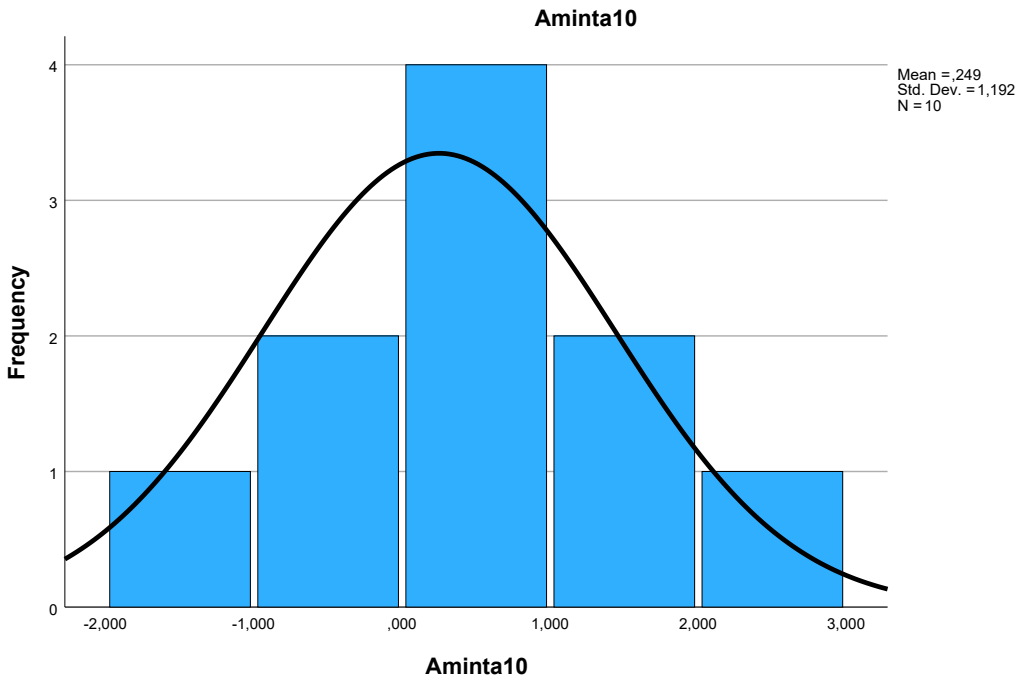
f. There are 482 values outside the specified distribution range. These values are skipped.

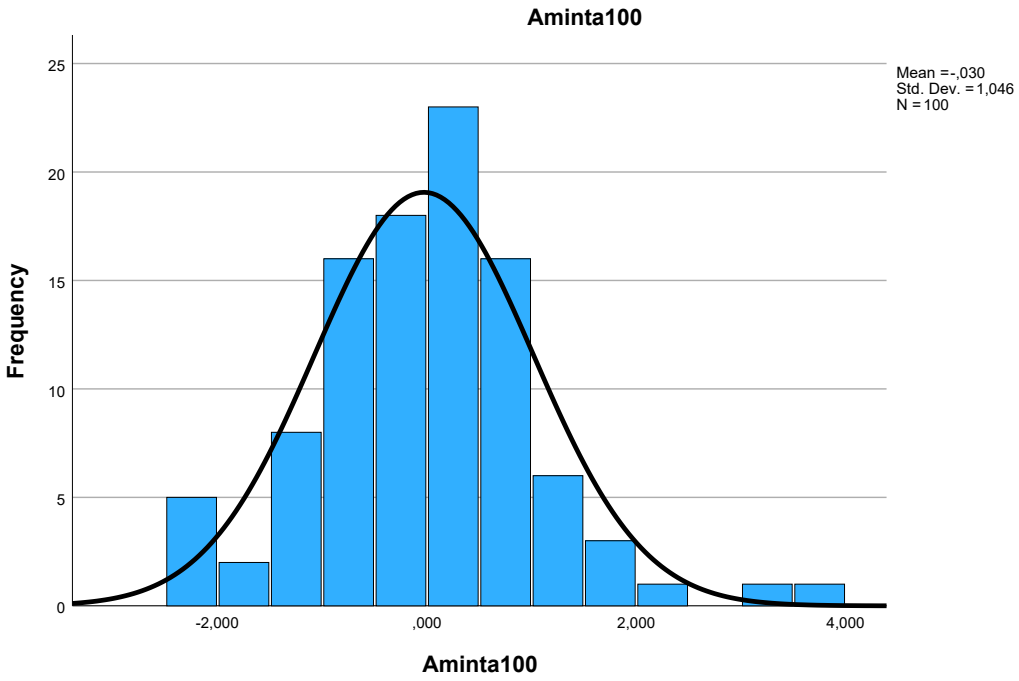
Frequencies

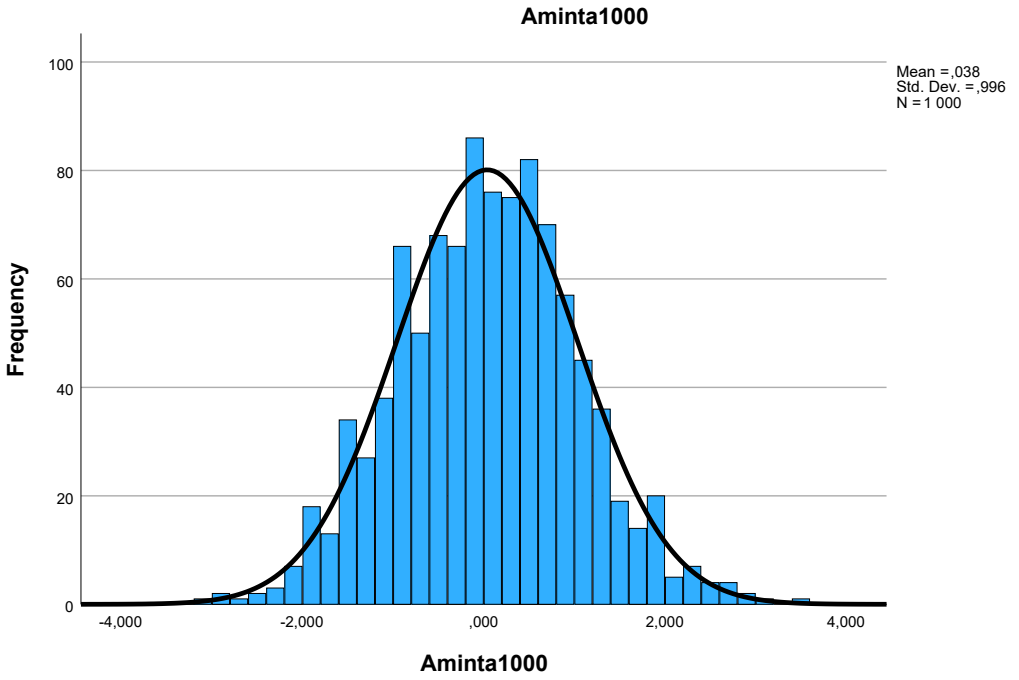
Statistics

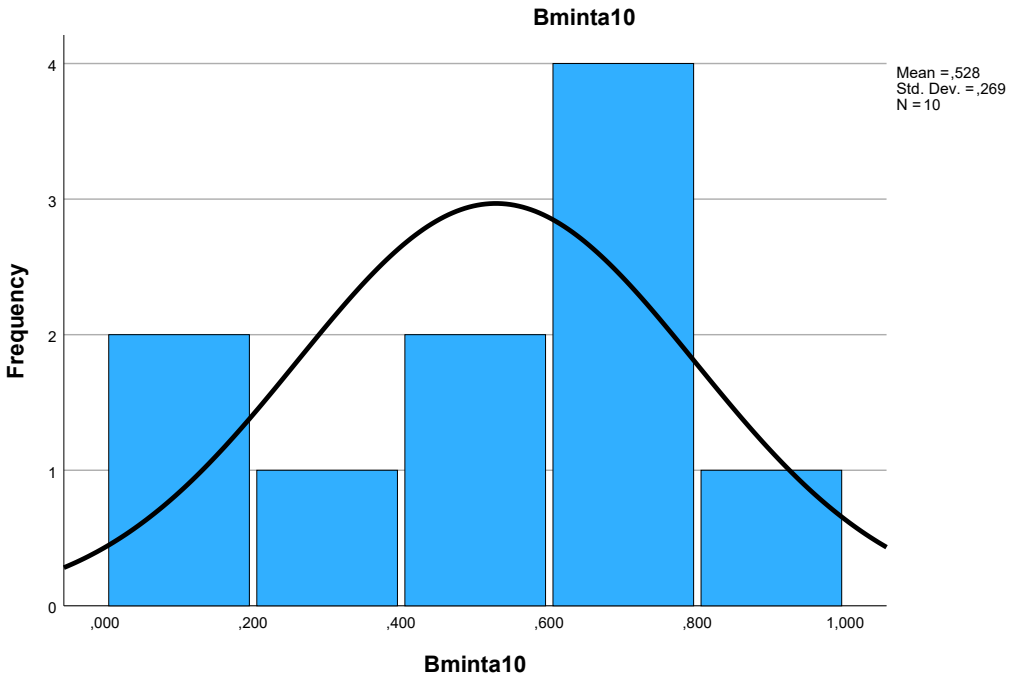
		Aminta10	Aminta100	Aminta1000	Bminta10	Bminta100	Bminta1000
N	Valid	10	100	1000	10	100	1000
	Missing	990	900	0	990	900	0

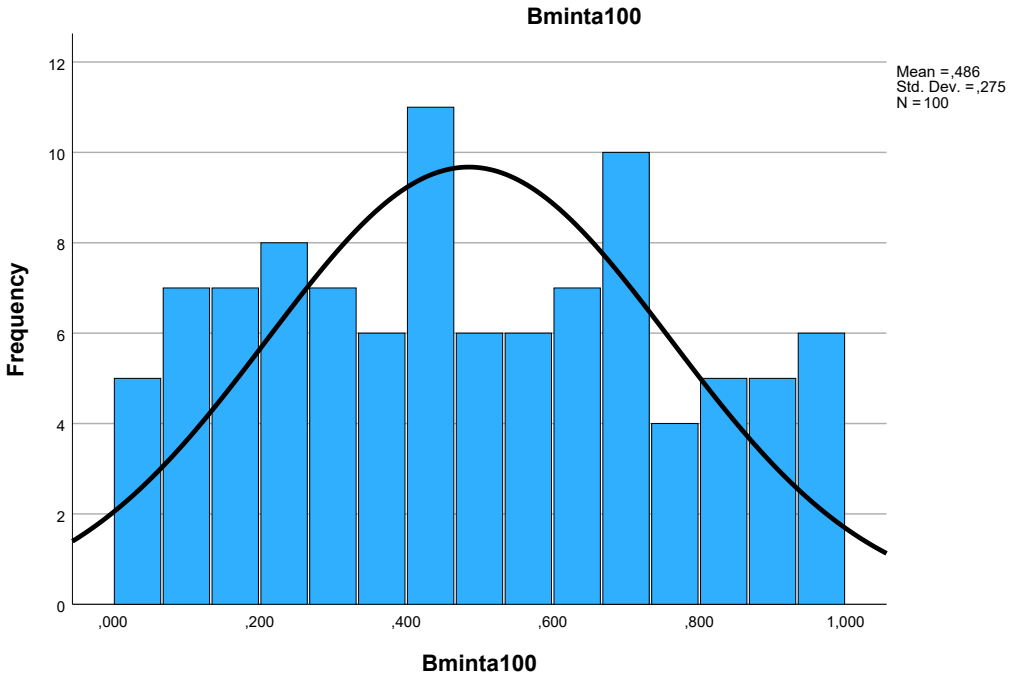
Histogram

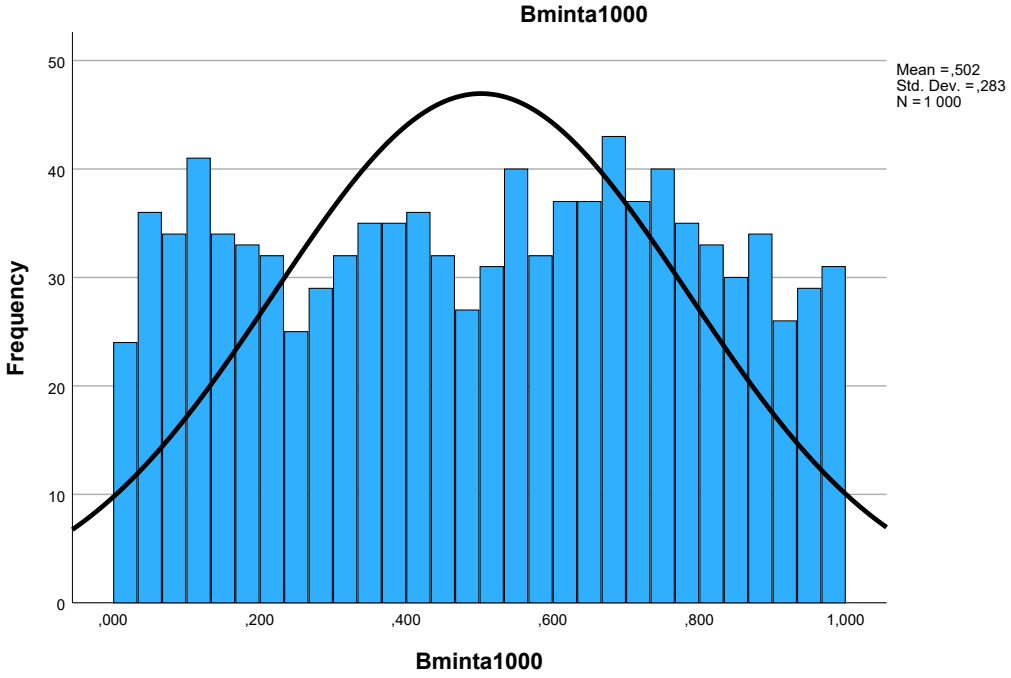



Aminta100
Mean =-,030
Std. Dev. =1,046
N =100
Frequency
25
20
15
10
5
0
-2,000
,000
2,000
4,000
Aminta100


Aminta1000
Mean =,038
Std. Dev. =,996
N =1 000
Frequency
100
80
60
40
20
0
-4,000
-2,000
,000
2,000
4,000
Aminta1000


Bminta10
Mean =,528
Std. Dev. =,269
N = 10
Frequency
0
1
2
3
4
,000
,200
,400
,600
,800
1,000
Bminta10


Bminta100
Mean =,486
Std. Dev. =,275
N = 100
Frequency
0
2
4
6
8
10
12
,000
,200
,400
,600
,800
1,000
Bminta100



PPlot

Model Description

Model Name		MOD_1
Series or Sequence	1	Aminta10
	2	Aminta100
	3	Aminta1000
	4	Bminta10
	5	Bminta100
	6	Bminta1000
Transformation		None
Non-Seasonal Differencing		0
Seasonal Differencing		0
Length of Seasonal Period		No periodicity
Standardization		Not applied
Distribution	Type	Normal
	Location	estimated
	Scale	estimated
Fractional Rank Estimation Method		Blom's
Rank Assigned to Ties		Mean rank of tied values

Applying the model specifications from MOD_1

Case Processing Summary

		Aminta10	Aminta100	Aminta1000	Bminta10
Series or Sequence Length		1000	1000	1000	1000
Number of Missing Values in the Plot	User-Missing	0	0	0	0
	System-Missing	990	900	0	990

Case Processing Summary

		Bminta100	Bminta1000
Series or Sequence Length		1000	1000
Number of Missing Values in the Plot	User-Missing	0	0
	System-Missing	900	0

The cases are unweighted.

Estimated Distribution Parameters

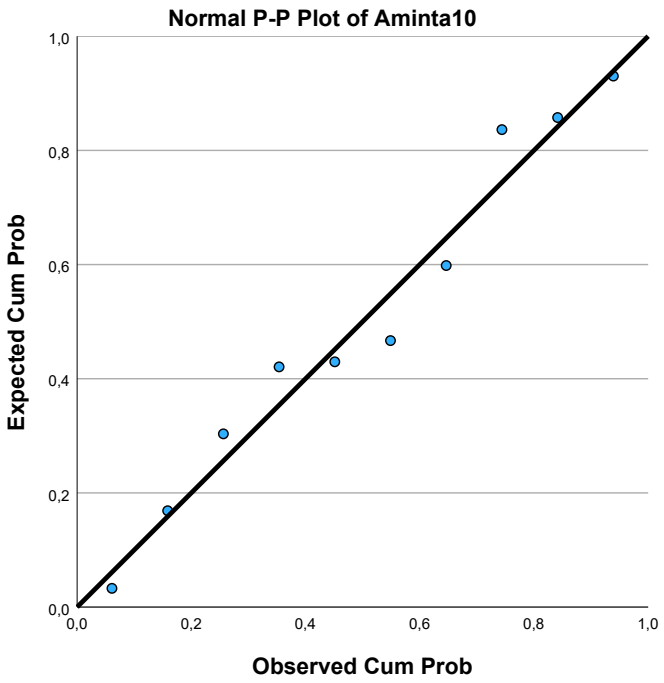
		Aminta10	Aminta100	Aminta1000	Bminta10	Bminta100
Normal Distribution	Location	,24930	-,03024	,03751	,52790	,48551
	Scale	1,191917	1,046400	,995928	,268839	,274905

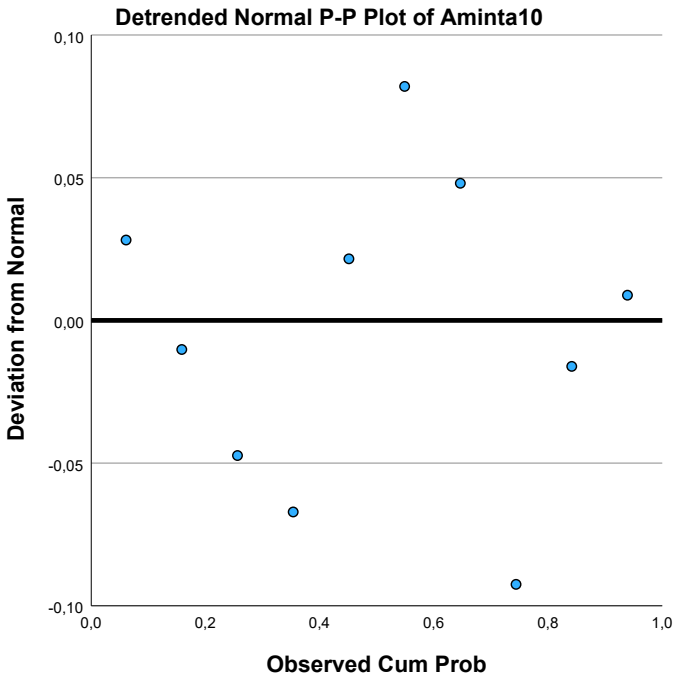
Estimated Distribution Parameters

		Bminta1000
Normal Distribution	Location	,50221
	Scale	,283219

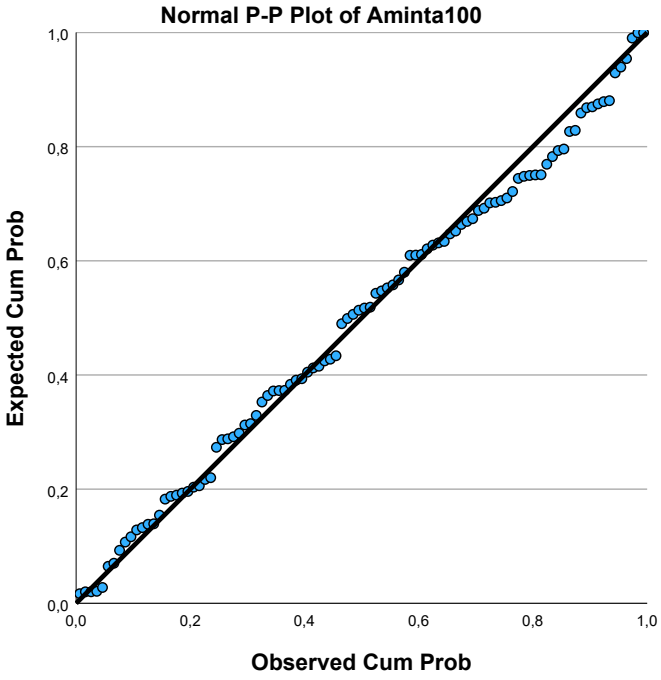
The cases are unweighted.

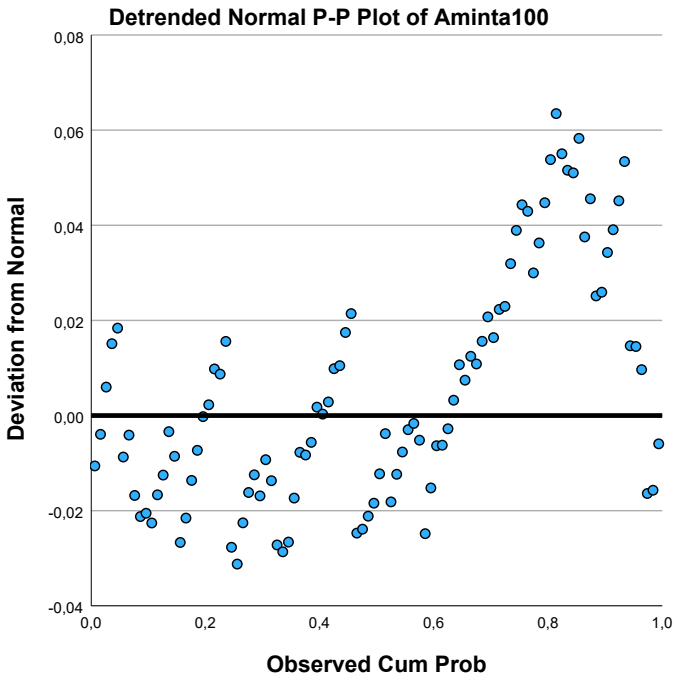
Aminta10



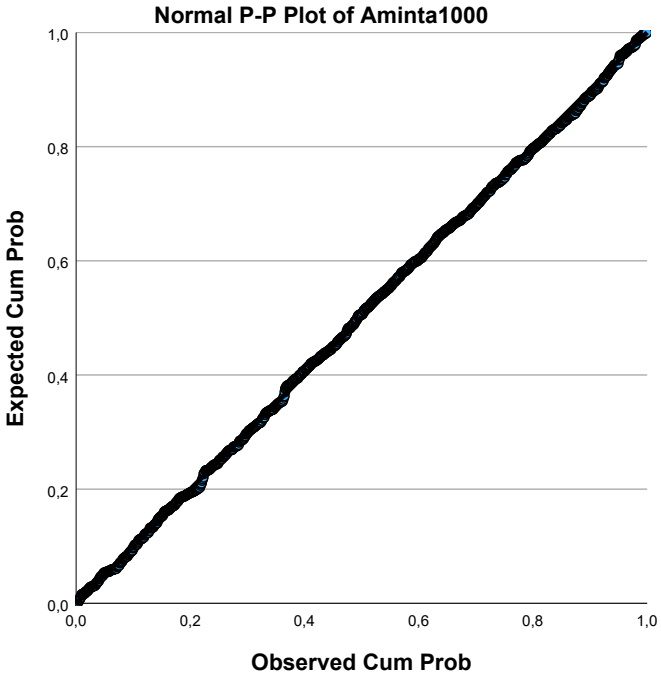

Detrended Normal P-P Plot of Aminta10
Deviation from Normal
0,10
0,05
0,00
-0,05
-0,10
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

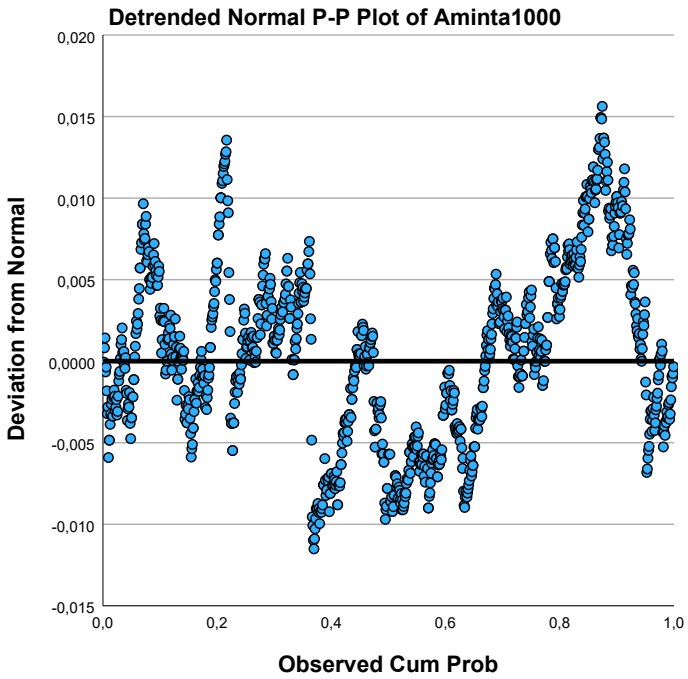
Aminta100


Normal P-P Plot of Aminta100
Expected Cum Prob
1,0
0,8
0,6
0,4
0,2
0,0
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

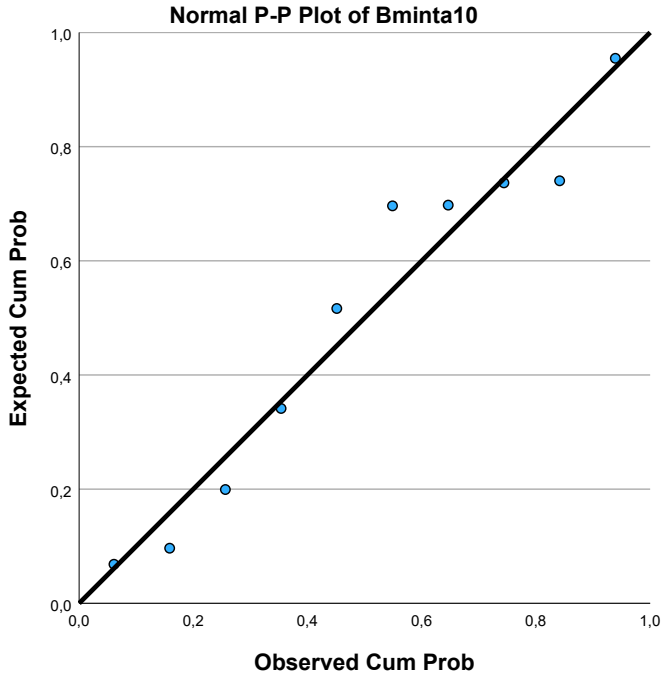

Detrended Normal P-P Plot of Aminta100
Deviation from Normal
0,08
0,06
0,04
0,02
0,00
-0,02
-0,04
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

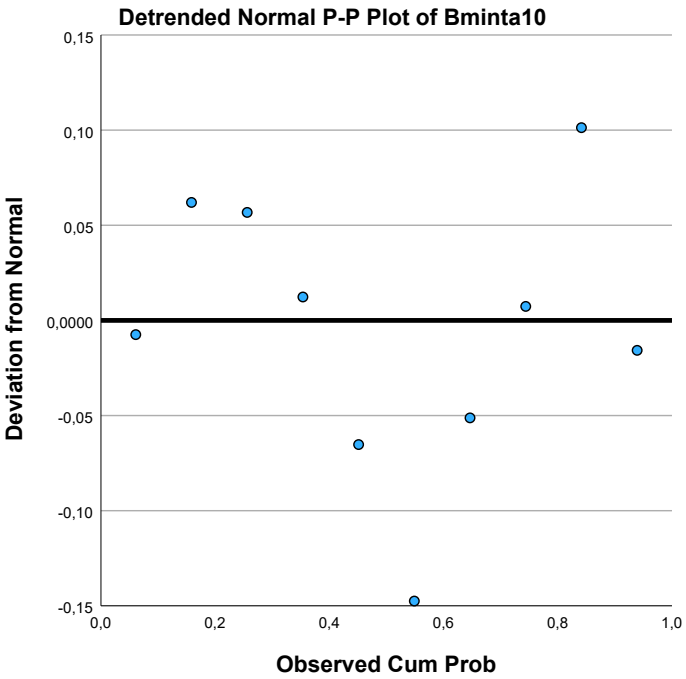
Aminta1000


Normal P-P Plot of Aminta1000
Expected Cum Prob
1,0
0,8
0,6
0,4
0,2
0,0
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

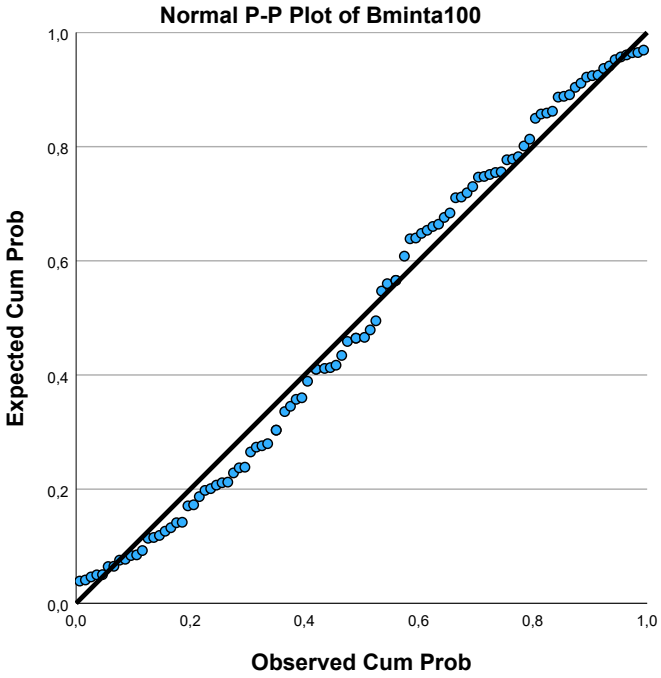

Detrended Normal P-P Plot of Aminta1000
Deviation from Normal
0,020
0,015
0,010
0,005
0,0000
-0,005
-0,010
-0,015
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

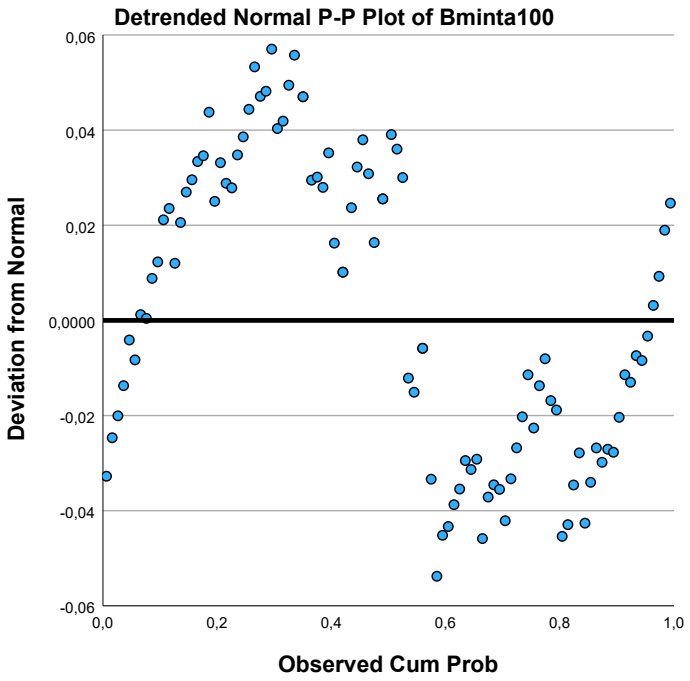
Bminta10


Normal P-P Plot of Bminta10
Expected Cum Prob
1,0
0,8
0,6
0,4
0,2
0,0
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

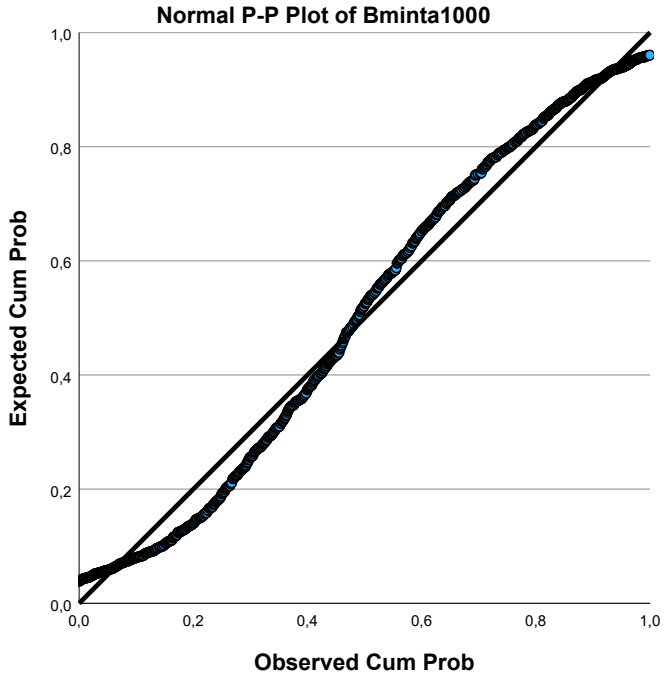

Detrended Normal P-P Plot of Bminta10
Deviation from Normal
0,15
0,10
0,05
0,0000
-0,05
-0,10
-0,15
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

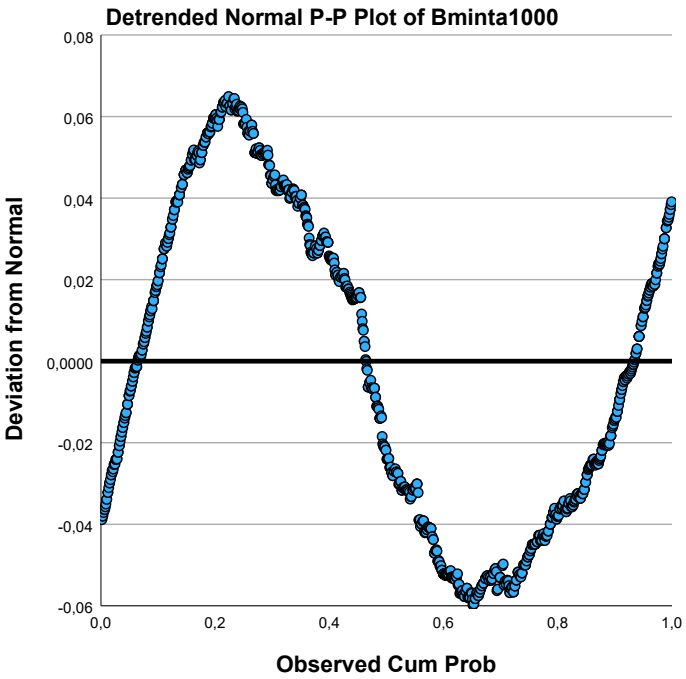
Bminta100


Normal P-P Plot of Bminta100
Expected Cum Prob
1,0
0,8
0,6
0,4
0,2
0,0
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob


Detrended Normal P-P Plot of Bminta100
Deviation from Normal
0,06
0,04
0,02
0,0000
-0,02
-0,04
-0,06
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob

Bminta1000


Normal P-P Plot of Bminta1000
Expected Cum Prob
1,0
0,8
0,6
0,4
0,2
0,0
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob


Detrended Normal P-P Plot of Bminta1000
Deviation from Normal
0,08
0,06
0,04
0,02
0,0000
-0,02
-0,04
-0,06
0,0
0,2
0,4
0,6
0,8
1,0
Observed Cum Prob