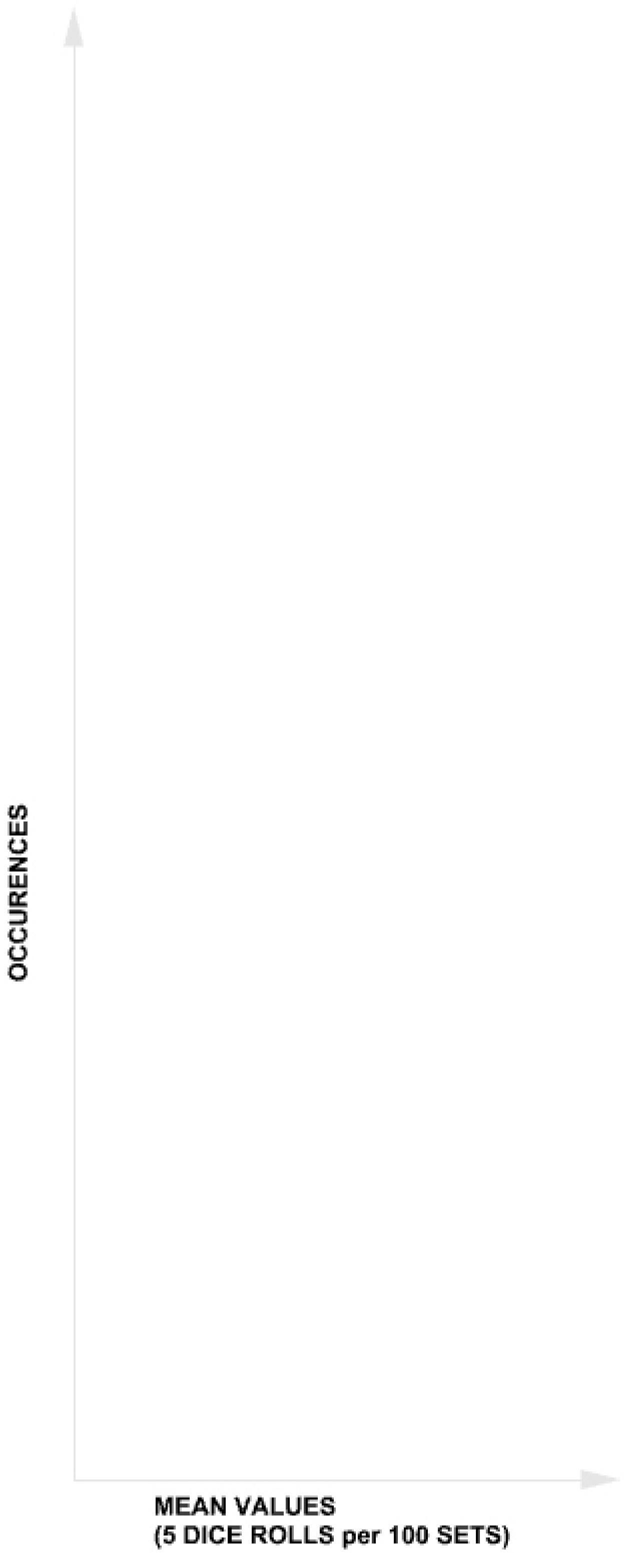
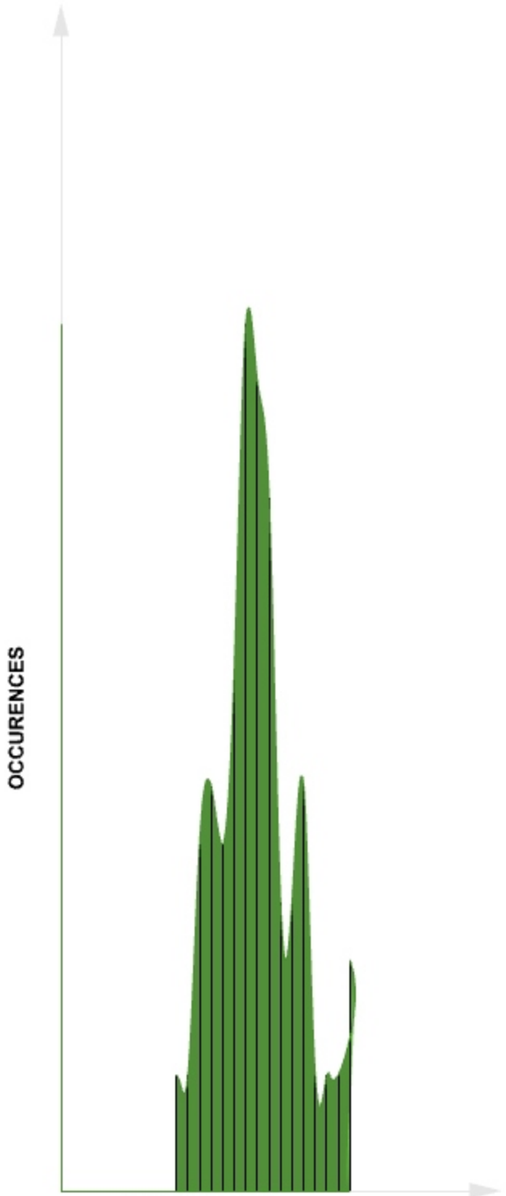
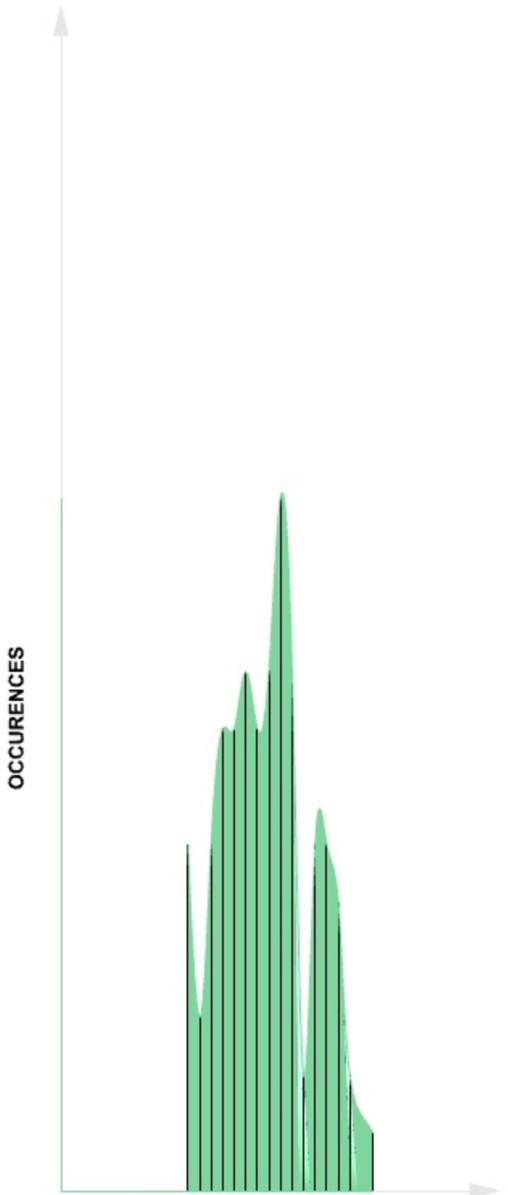


MEAN FREQUENCY TABLE



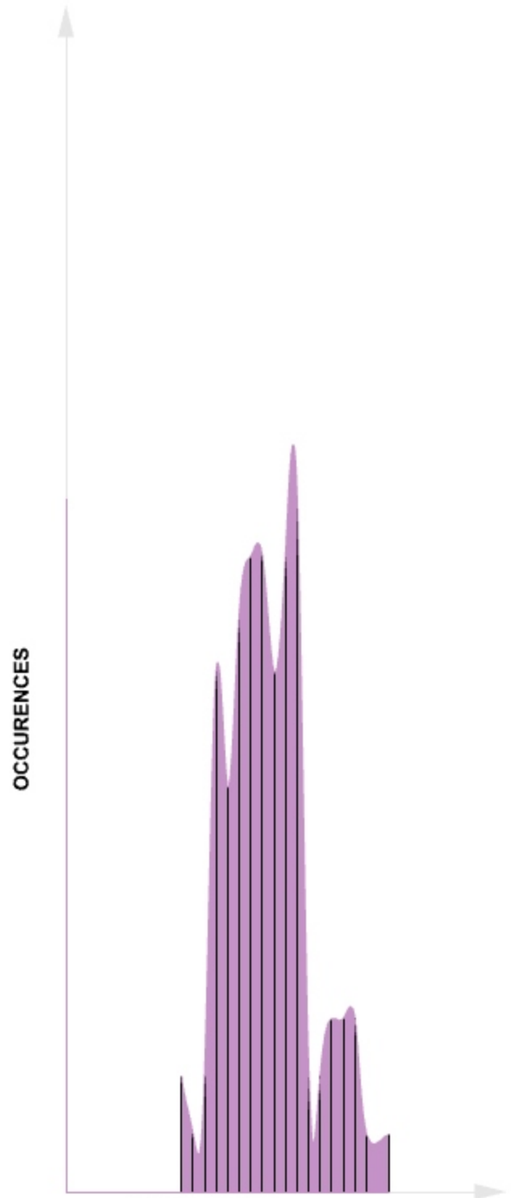
1	2.0	2
2	2.2	2
3	2.4	6
4	2.6	7
5	2.8	6
6	3.0	9
7	3.2	15
8	3.4	14
9	3.6	12
10	3.8	5
11	4.0	5
12	4.2	7
13	4.4	2
14	4.6	2
15	4.8	2
16	5.0	4

MEAN FREQUENCY TABLE



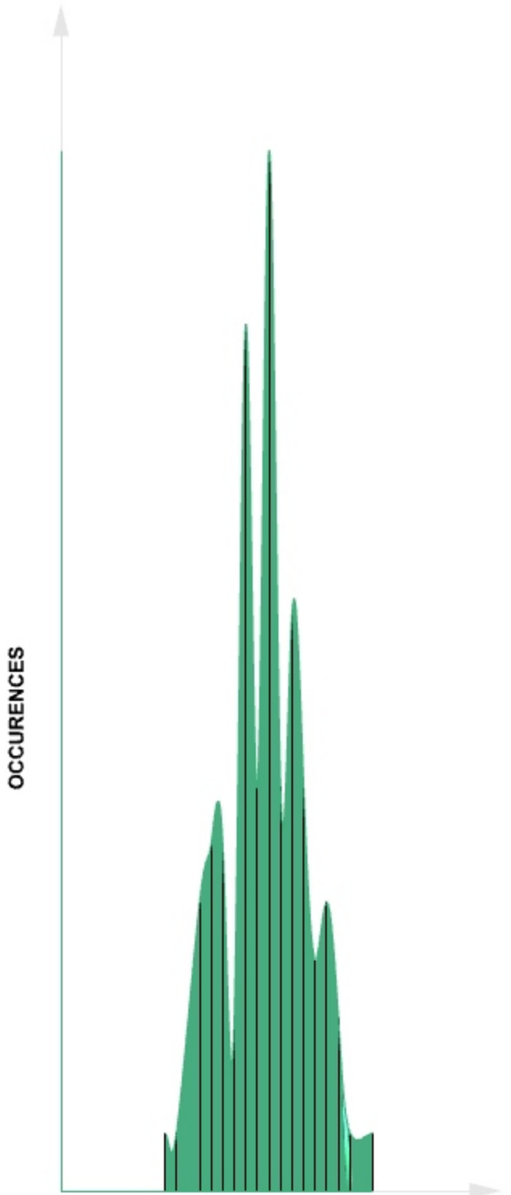
1	2.2	6
2	2.4	3
3	2.6	6
4	2.8	8
5	3.0	8
6	3.2	9
7	3.4	8
8	3.6	9
9	3.8	12
10	4.0	9
11	4.2	2
12	4.4	6
13	4.6	6
14	4.8	5
15	5.0	2
16	5.4	1

MEAN FREQUENCY TABLE



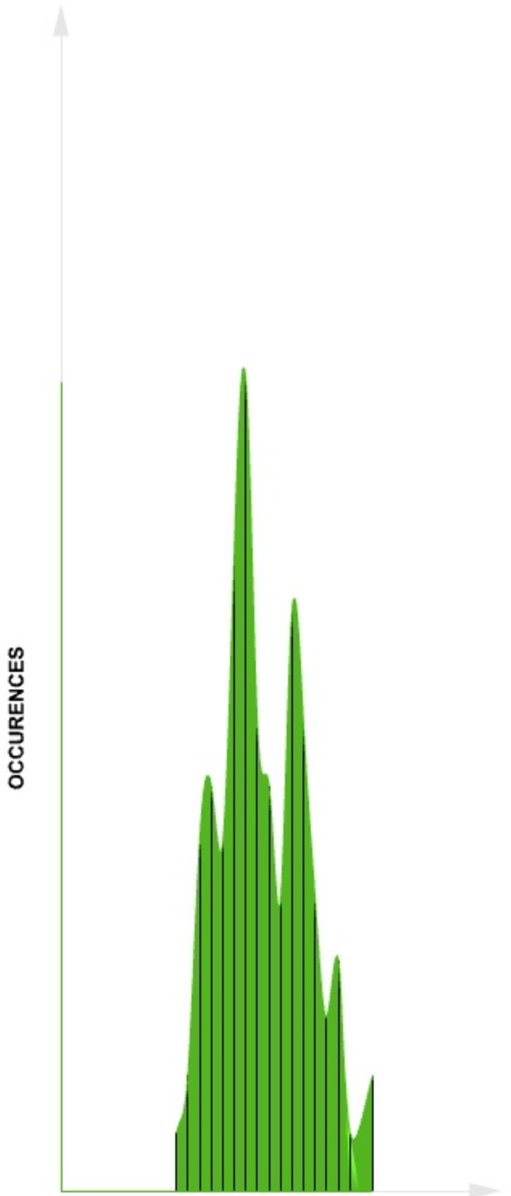
1	2.0	2
2	2.2	1
3	2.4	2
4	2.6	9
5	2.8	7
6	3.0	10
7	3.2	11
8	3.4	11
9	3.6	9
10	3.8	11
11	4.0	12
12	4.2	2
13	4.4	2
14	4.6	3
15	4.8	3
16	5.0	3
17	5.2	1
18	5.6	1

MEAN FREQUENCY TABLE



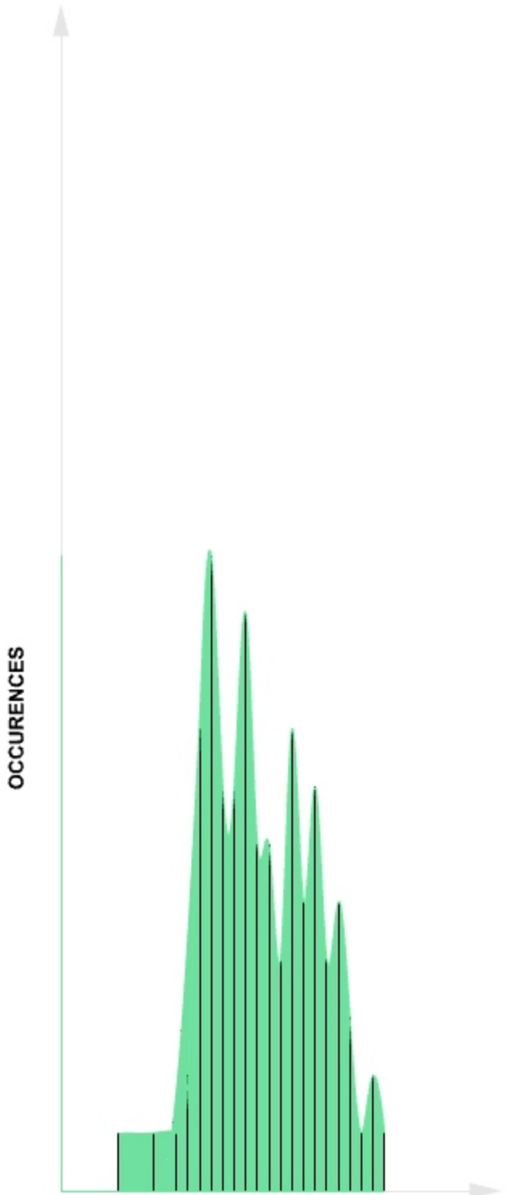
1	1.8	1
2	2.0	1
3	2.4	5
4	2.6	6
5	2.8	6
6	3.0	3
7	3.2	15
8	3.4	7
9	3.6	18
10	3.8	7
11	4.0	10
12	4.2	7
13	4.4	4
14	4.6	5
15	4.8	3
16	5.0	1
17	5.4	1

MEAN FREQUENCY TABLE



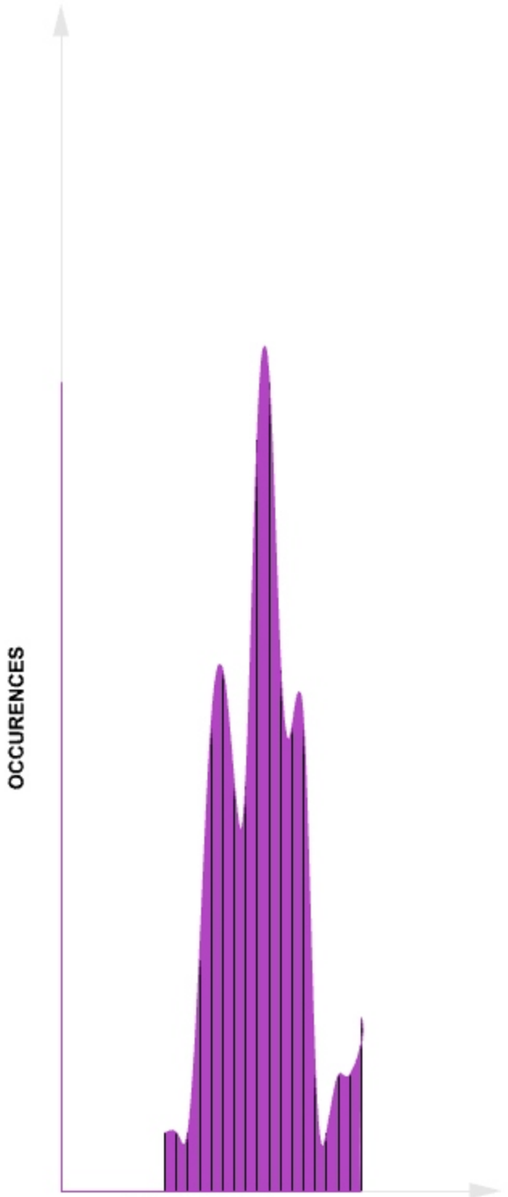
1	2.0	1
2	2.2	2
3	2.4	6
4	2.6	7
5	2.8	6
6	3.0	11
7	3.2	14
8	3.4	8
9	3.6	7
10	3.8	5
11	4.0	10
12	4.2	8
13	4.4	5
14	4.6	3
15	4.8	4
16	5.0	1
17	5.4	2

MEAN FREQUENCY TABLE



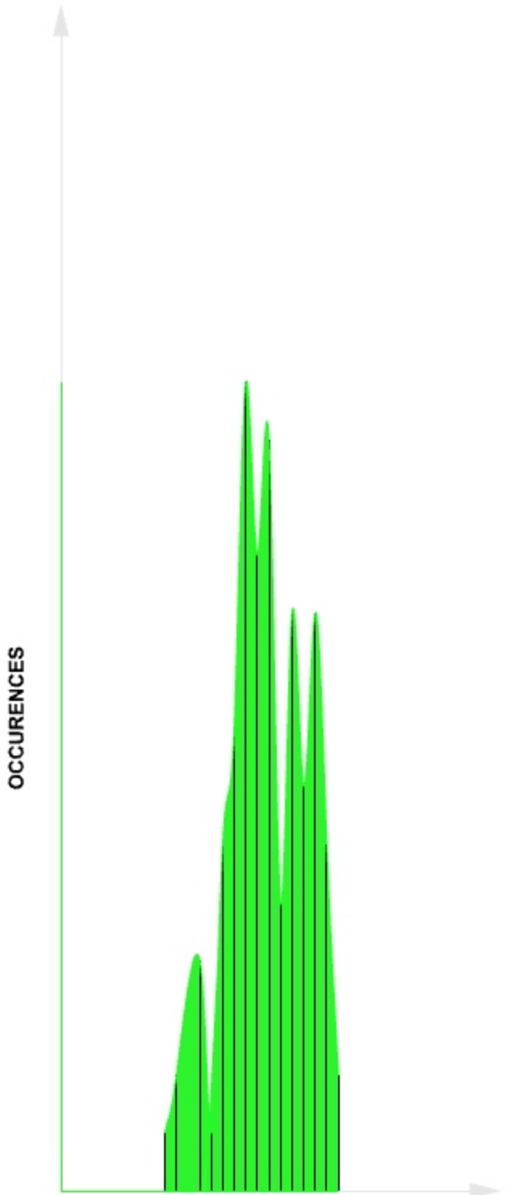
1	1.0	1
2	1.6	1
3	2.0	1
4	2.2	2
5	2.4	8
6	2.6	11
7	2.8	7
8	3.0	7
9	3.2	10
10	3.4	6
11	3.6	6
12	3.8	4
13	4.0	8
14	4.2	5
15	4.4	7
16	4.6	4
17	4.8	5
18	5.0	3
19	5.2	1
20	5.4	2
21	5.6	1

MEAN FREQUENCY TABLE



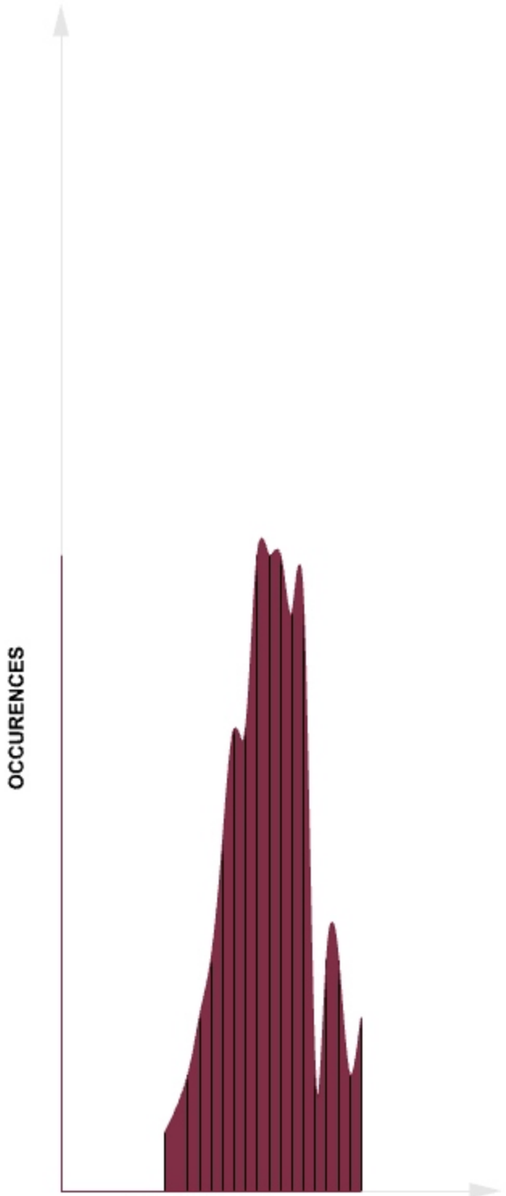
1	1.8	1
2	2.0	1
3	2.2	1
4	2.4	4
5	2.6	8
6	2.8	9
7	3.0	7
8	3.2	7
9	3.4	13
10	3.6	14
11	3.8	9
12	4.0	8
13	4.2	8
14	4.4	2
15	4.6	1
16	4.8	2
17	5.0	2
18	5.2	3

MEAN FREQUENCY TABLE



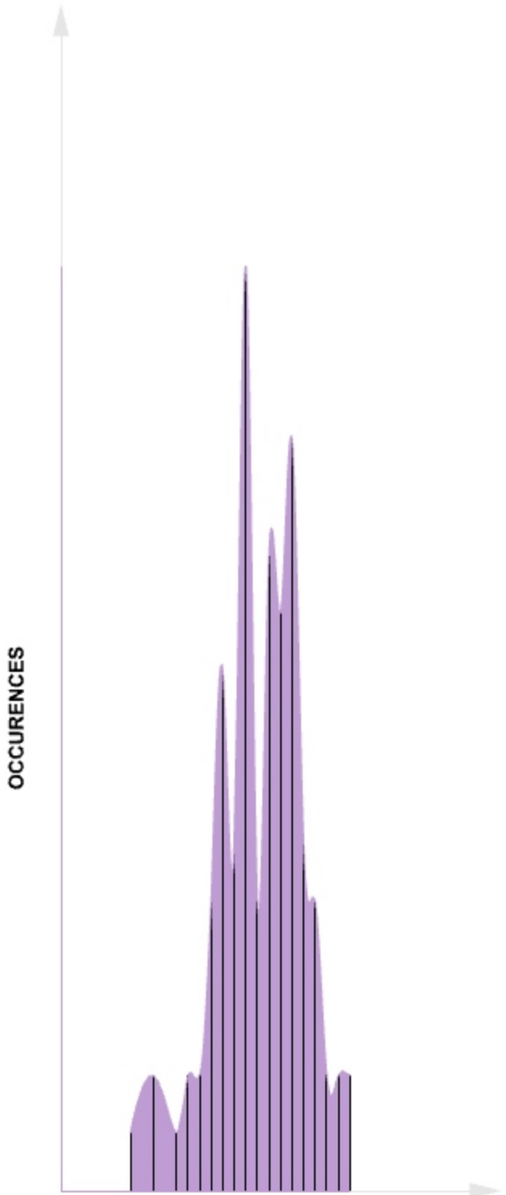
1	1.8	1
2	2.0	2
3	2.4	4
4	2.6	1
5	2.8	6
6	3.0	8
7	3.2	14
8	3.4	11
9	3.6	13
10	3.8	5
11	4.0	10
12	4.2	7
13	4.4	10
14	4.6	6
15	4.8	2

MEAN FREQUENCY TABLE



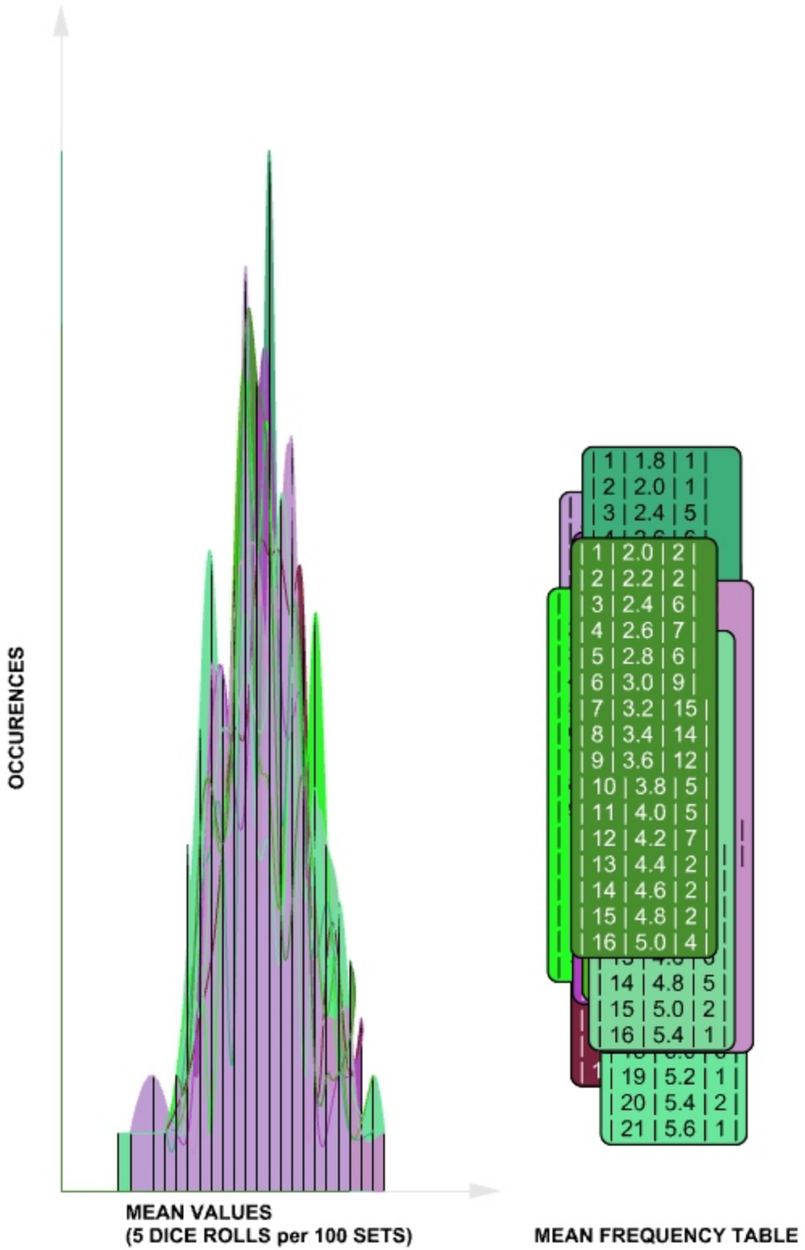
1	1.8	1
2	2.2	2
3	2.4	3
4	2.6	4
5	2.8	6
6	3.0	8
7	3.2	8
8	3.4	11
9	3.6	11
10	3.8	11
11	4.0	10
12	4.2	10
13	4.4	2
14	4.6	4
15	4.8	4
16	5.0	2
17	5.2	3

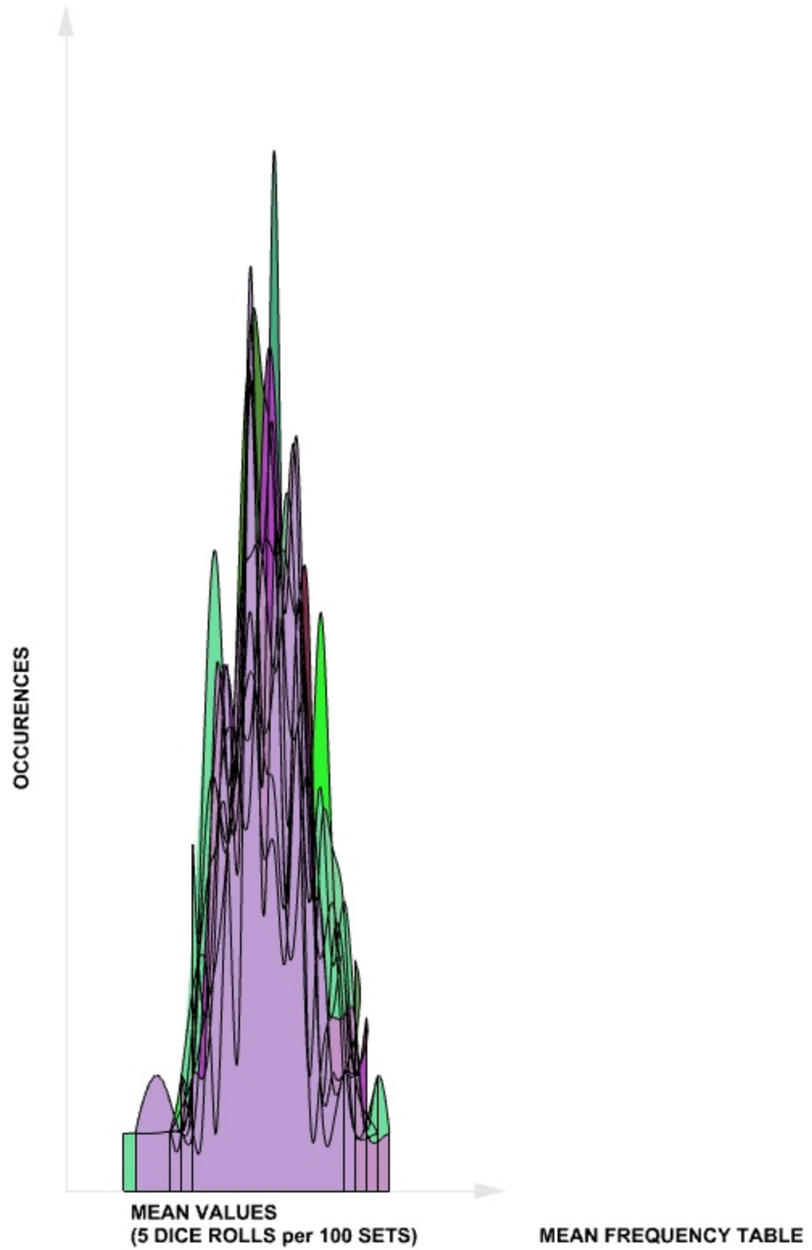
MEAN FREQUENCY TABLE

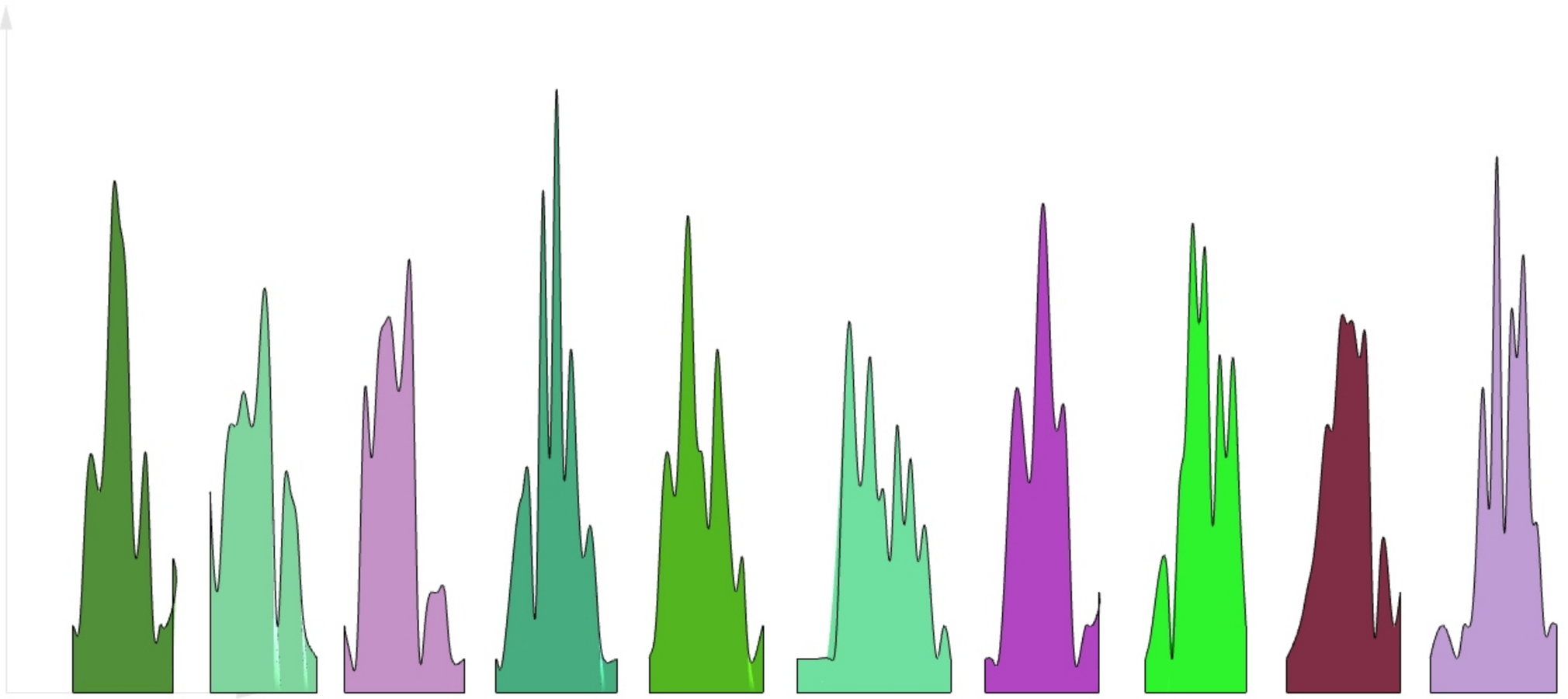


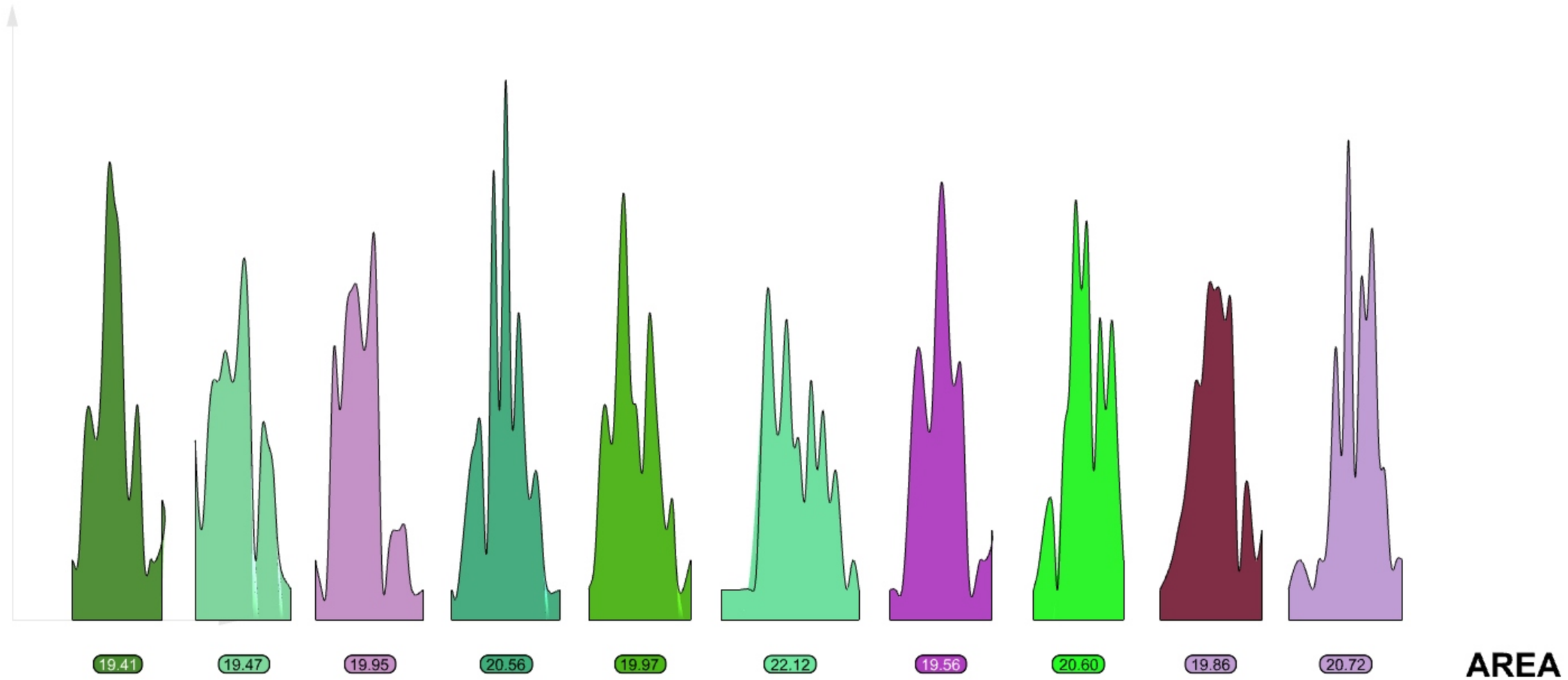
1	1.2	1
2	1.6	2
3	2.0	1
4	2.2	2
5	2.4	2
6	2.6	5
7	2.8	9
8	3.0	6
9	3.2	16
10	3.4	5
11	3.6	11
12	3.8	10
13	4.0	13
14	4.2	6
15	4.4	5
16	4.6	2
17	4.8	2
18	5.0	2

MEAN FREQUENCY TABLE


OCCURENCES
MEAN VALUES
(5 DICE ROLLS per 100 SETS)
1	1.8	1
2	2.0	1
3	2.4	5
1	2.0	2
2	2.2	2
3	2.4	6
4	2.6	7
5	2.8	6
6	3.0	9
7	3.2	15
8	3.4	14
9	3.6	12
10	3.8	5
11	4.0	5
12	4.2	7
13	4.4	2
14	4.6	2
15	4.8	2
16	5.0	4
14	4.8	5
15	5.0	2
16	5.4	1
19	5.2	1
20	5.4	2
21	5.6	1
MEAN FREQUENCY TABLE


OCCURENCES
MEAN VALUES
(5 DICE ROLLS per 100 SETS)
MEAN FREQUENCY TABLE




19.41
19.47
19.95
20.56
19.97
22.12
19.56
20.60
19.86
20.72
AREA

Rhino Python Editor - D:_____conceptModeler\4_CentralLimitTheorem_tests_g_clean.py

File Edit Debug Tools Help

4_CentralLimitTheorem_tests_g_clean.py | linearRegression_v1.py | icp_base-functions_v0.py | cumsum_python3_test.py | frange_test.py | Enepper Surface_v2B.19_higherOrderVersion10-D_fixed2_variations!!_iterationGen_02_hiResPrinter_03.py

```
"""
testing the Central Limit Theorem,
TEST:
- We randomly roll a dice 5 times per set.
- We calculate the mean of this batch.
- We then run this batch run 100 times.
- Then we compute the sample distribution on
10:53 07/01/2024
"""
# ------------------------------------------------------------------ STAT CALLS
import statistics as st
import random as rnd
from collections import Counter
#input =  ['a', 'a', 'b', 'b', 'b']
#c = Counter( input )
#print( c.items() )
# ------------------------------------------------------------------ GEO/VIZ CALLS
import rhinoscriptsyntax as rs
import Rhino.Geometry as rg
import scriptcontext
import System.Drawing.Color as color
# ------------------------------------------------------------------ VIZ UTILITIES
# command-line table enumarator viz
def plotAsTable(numLst):
#plotAsTable(loopedMeanLst

# dual list to printable text
def plotDualLstAsTable_str(numLst1,numLst2):
# ------------------------------------------------------------------ UTILITIES
# This is the standard dice face list
#print(range(1,7,1))
randomChoiceFromLst = lambda : rnd.randrange(1,7,1)
rollCnt = 5 # vInnerLoop
meanXRolls = lambda vOuterXloop,vInnerLoop : [st.mean([randomChoiceFromLst() for i in range(vInnerLoop)]) for x in range(vOuterXloop)]

# ------------------------------------------------------------------IMPLEMENTATION
# PERFORM THE DICE ROLLS IN X BATCHES (Currently X = 100)
# 100 sets of 5 die rolls.
loopedMeanLst = meanXRolls(100,5)
####plotAsTable(loopedMeanLst)
```

Output | Variables | Call Stack

Rhino Python Editor - D:_____conceptModeler\4_CentralLimitTheorem_tests_g_clean.py

File Edit Debug Tools Help

4_CentralLimitTheorem_tests_g_clean.py | linearRegression_v1.py | icp_base-functions_v0.py | cumsum_python3_test.py | frange_

```
"""
testing the Central Limit Theorem,
TEST:
- We randomly roll a dice 5 times per set.
- We calculate the mean of this batch.
- We then run this batch run 100 times.
- Then we compute the sample distribution on
10:53 07/01/2024
"""
# ------------------------------------------------------------------- STAT CALLS
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import random as rnd
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#c = Counter( input )
#print( c.items() )
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import Rhino.Geometry as rg
import scriptcontext
import System.Drawing.Color as color
# ------------------------------------------------------------------- VIZ UTILITIES
# command-line table enumarator viz
def plotAsTable(numLst):
#plotAsTable(loopedMeanLst

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def plotDualLstAsTable_str(numLst1,numLst2):
# ------------------------------------------------------------------- UTILITIES
# This is the standard dice face list
#print(range(1,7,1))
randomChoiceFromLst = lambda : rnd.randrange(1,7,1)
rollCnt = 5 # vInnerLoop
meanXRolls = lambda vOuterXloop,vInnerLoop : [st.mean([randomChoiceFromLst() for i in

# ------------------------------------------------------------------IMPLEMENTATION
# PERFORM THE DICE ROLLS IN X BATCHES (Currently X = 100)
# 100 sets of 5 die rolls.
loopedMeanLst = meanXRolls(100,5)
```
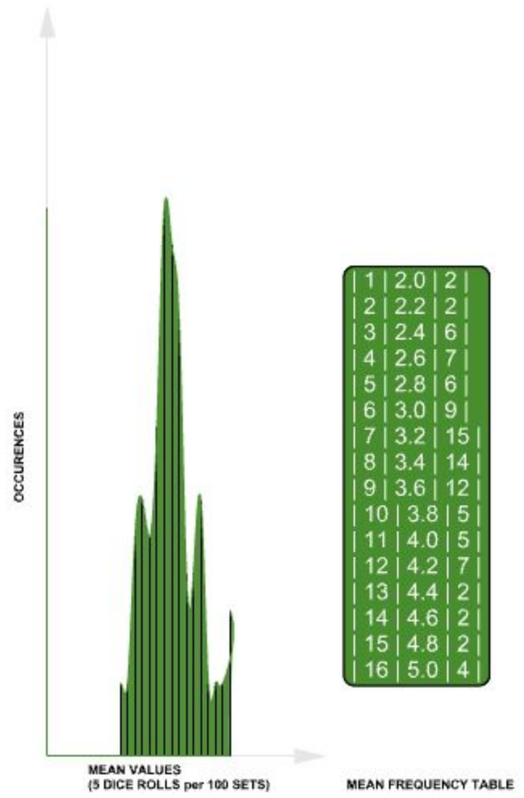

Output | Variables | Call Stack

KB) - Rhinoceros 6 Commercial - [240107_2]

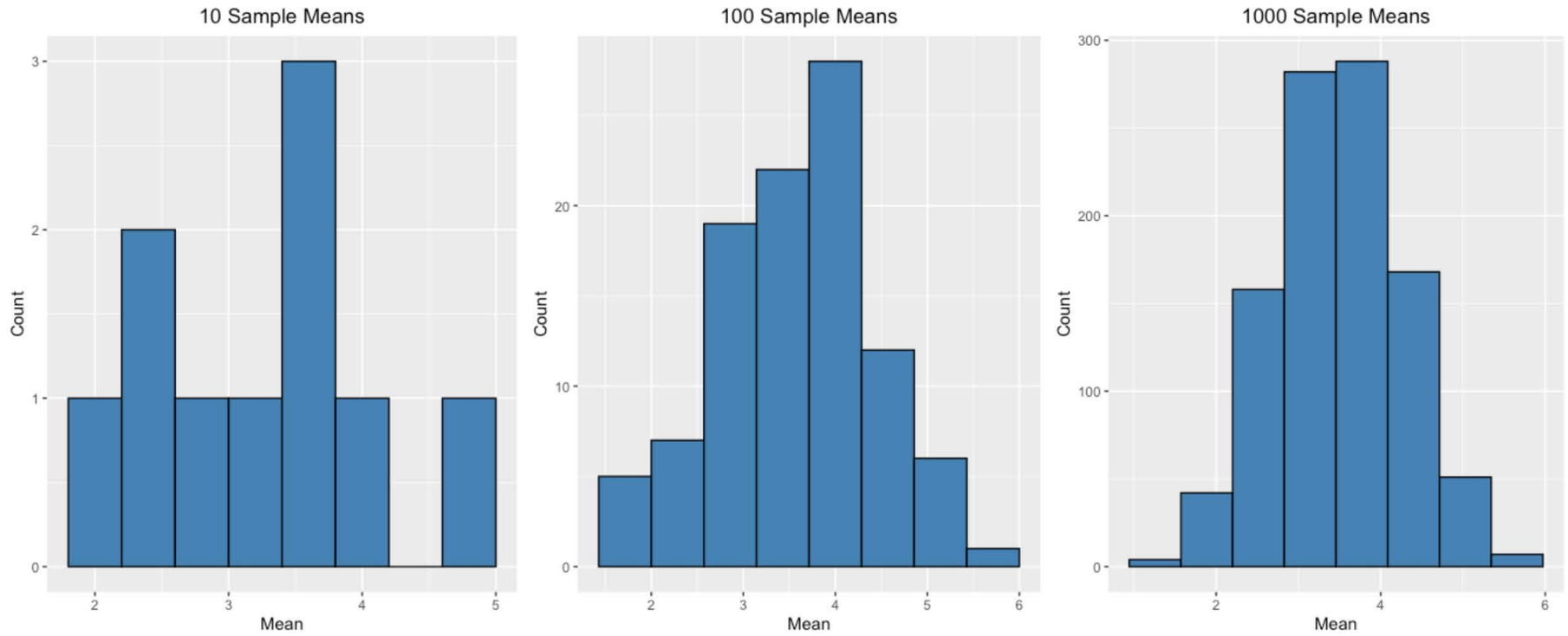
s | Mesh Tools | Render Tools | Drafting | New in V6



Name	On	L...	Material	Linetype
WIP	✓			Continuous
100 sets of 5 rolls each				Continuous
pt				Continuous
axis				Continuous
axisLabels				Continuous
1				Continuous
2				Continuous
3				Continuous
4				Continuous
5				Continuous
6				Continuous
7				Continuous
8				Continuous
9				Continuous
10				Continuous
parallelView				Continuous
areaLabels				Continuous

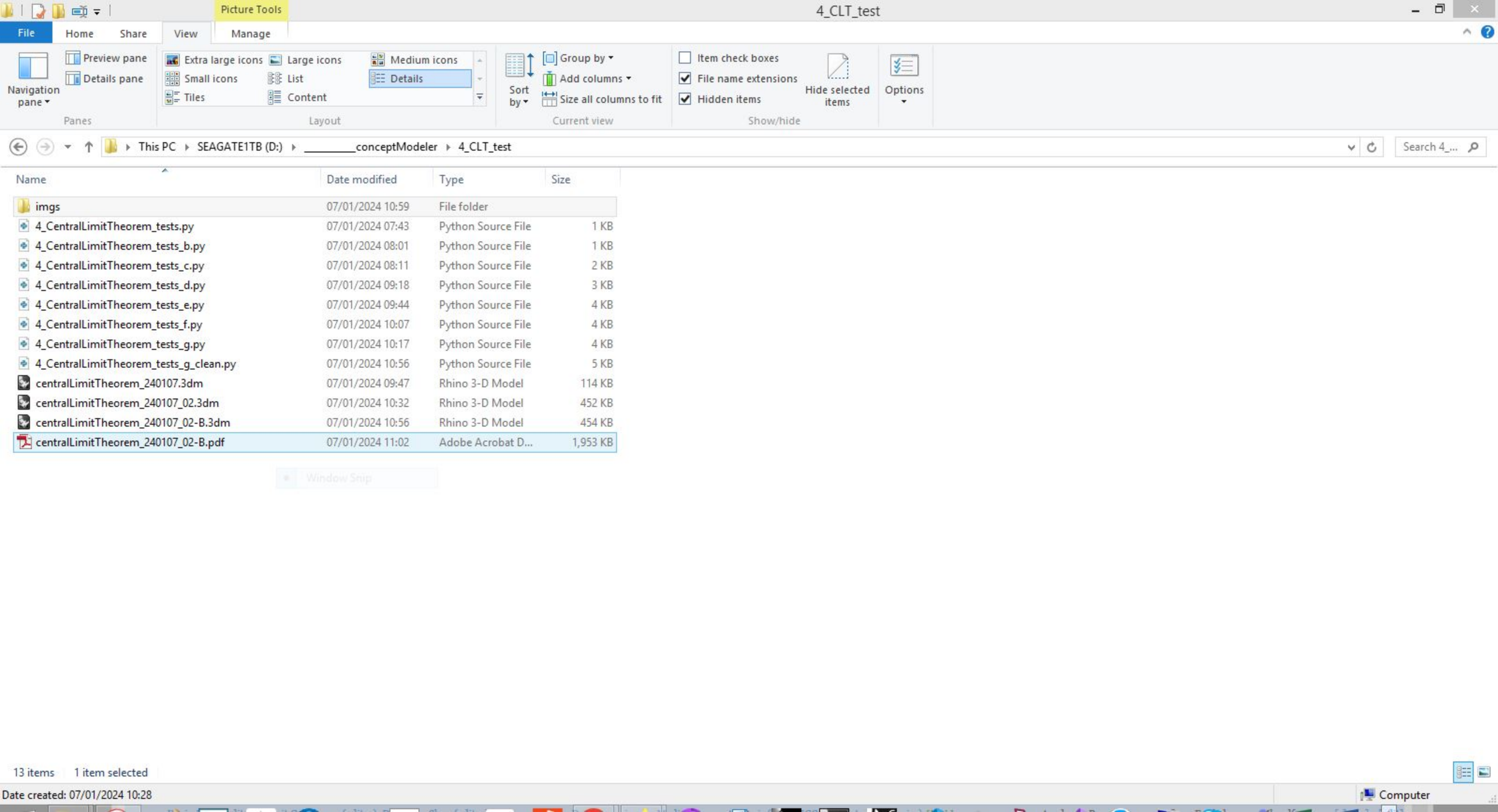
Central limit theorem

The sampling distribution of a statistic becomes closer to the normal distribution as the size of the sample increases.



* Samples should be random and independent

Generally, a sample size of at least 30 is required for the central limit theorem to apply.


Picture Tools
4_CLT_test
File
Home
Share
View
Manage
Navigation pane
Preview pane
Details pane
Panes
Extra large icons
Large icons
Medium icons
Small icons
List
Details
Tiles
Content
Layout
Sort by
Group by
Add columns
Size all columns to fit
Current view
Item check boxes
File name extensions
Hidden items
Hide selected items
Show/hide
Options
This PC ▸ SEAGATE1TB (D:) ▸ _____conceptModeler ▸ 4_CLT_test
Search 4_...
Name
Date modified
Type
Size
imgs 07/01/2024 10:59 File folder
4_CentralLimitTheorem_tests.py 07/01/2024 07:43 Python Source File 1 KB
4_CentralLimitTheorem_tests_b.py 07/01/2024 08:01 Python Source File 1 KB
4_CentralLimitTheorem_tests_c.py 07/01/2024 08:11 Python Source File 2 KB
4_CentralLimitTheorem_tests_d.py 07/01/2024 09:18 Python Source File 3 KB
4_CentralLimitTheorem_tests_e.py 07/01/2024 09:44 Python Source File 4 KB
4_CentralLimitTheorem_tests_f.py 07/01/2024 10:07 Python Source File 4 KB
4_CentralLimitTheorem_tests_g.py 07/01/2024 10:17 Python Source File 4 KB
4_CentralLimitTheorem_tests_g_clean.py 07/01/2024 10:56 Python Source File 5 KB
centralLimitTheorem_240107.3dm 07/01/2024 09:47 Rhino 3-D Model 114 KB
centralLimitTheorem_240107_02.3dm 07/01/2024 10:32 Rhino 3-D Model 452 KB
centralLimitTheorem_240107_02-B.3dm 07/01/2024 10:56 Rhino 3-D Model 454 KB
centralLimitTheorem_240107_02-B.pdf 07/01/2024 11:02 Adobe Acrobat D... 1,953 KB
13 items
1 item selected
Date created: 07/01/2024 10:28
Computer