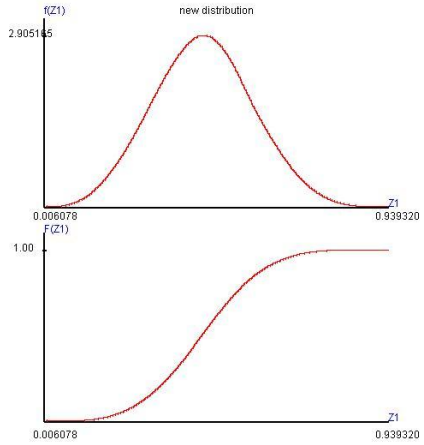
Chapter ten The coefficient of random variable

1)The sample MAD

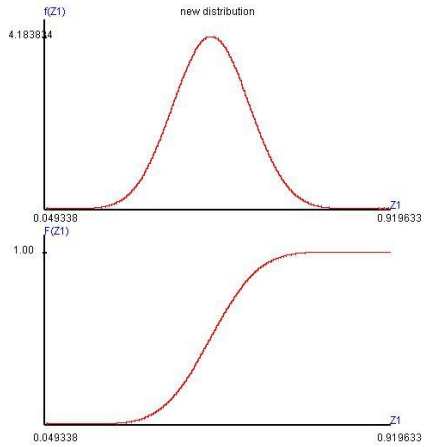
$$X_1,...,X_n \overset{iid}{\sim} f_X(x), MAD = \frac{\sum_{i=1}^{n}\left|X_i - \overline{X}\right|}{n}, \overline{X} = \frac{\sum_{i=1}^{n} X_i}{n}$$

1.1) $X_1,...,X_n \overset{iid}{\sim} Uniform(\alpha = -1, \beta = 1), Var(X) = \frac{1}{3}, \sigma_X = 0.577350269,$

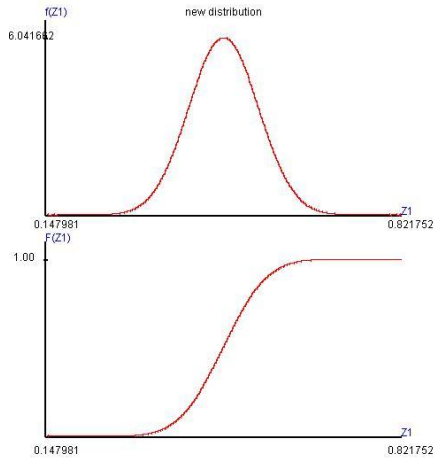
1.1.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.43333
	Geometrical Mean :	0.40948
	Harmonic Mean :	0.38067
	Variance :	0.01827
	S.D. :	0.13516
	Skewed Coef. :	0.06394
	Kurtosis Coef. :	2.72858
	MAD :	0.10886
	Range :	0.93671
	Mid_range :	0.47270
	Median :	0.43245
	Q1 :	0.33917
	Q2 :	0.43245
	Q3 :	0.52521
	IQR :	0.18604
	C.V. :	0.31191

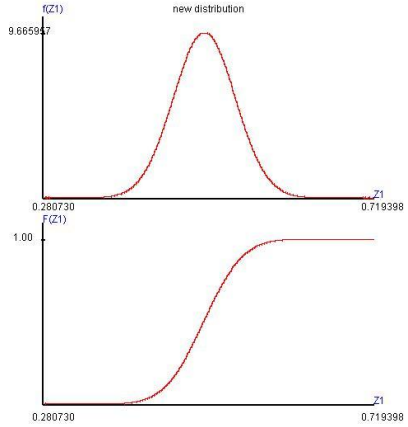
1.1.2n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.46666
	Geometrical Mean :	0.45673
	Harmonic Mean :	0.44610
	Variance :	0.00881
	S.D. :	0.09384
	Skewed Coef. :	0.01674
	Kurtosis Coef. :	2.87315
	MAD :	0.07528
	Range :	0.87353
	Mid_range :	0.48449
	Median :	0.46642
	Q1 :	0.40235
	Q2 :	0.46642
	Q3 :	0.53068
	IQR :	0.12832
	C.V. :	0.20109

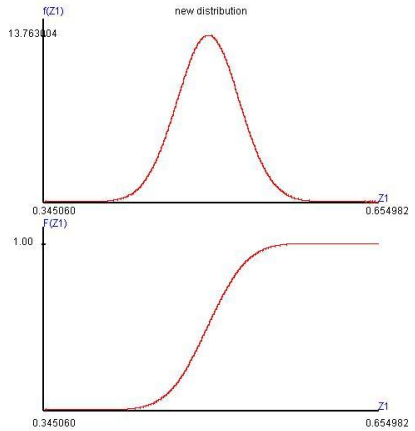
1.1.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.48332 Geometrical Mean : 0.47877 Harmonic Mean : 0.47409 Variance : 0.00430 S.D. : 0.06554 Skewed Coef. : 0.00401 Kurtosis Coef. : 2.93976 MAD : 0.05243 Range : 0.67628 Mid_range : 0.48487 Median : 0.48329 Q1 : 0.43880 Q2 : 0.48329 Q3 : 0.52779 IQR : 0.08899 C.V. : 0.13560

1.1.4)n=50

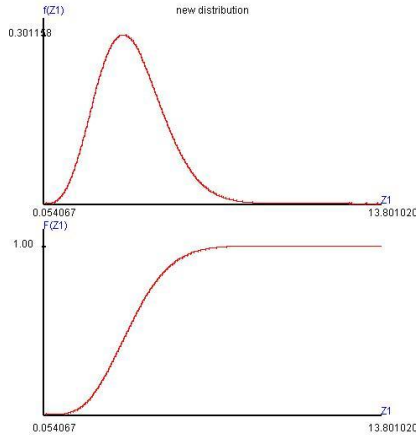
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.49334 Geometrical Mean : 0.49161 Harmonic Mean : 0.48987 Variance : 0.00169 S.D. : 0.04109 Skewed Coef. : 0.00108 Kurtosis Coef. : 2.97539 MAD : 0.03282 Range : 0.44030 Mid_range : 0.50006 Median : 0.49334 Q1 : 0.46554 Q2 : 0.49334 Q3 : 0.52112 IQR : 0.05558 C.V. : 0.08329

1.1.5)n=100

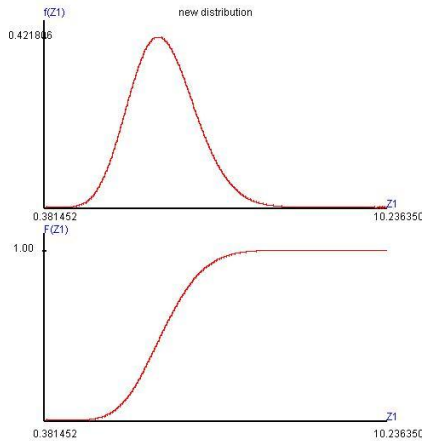
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.49667 Geometrical Mean : 0.49582 Harmonic Mean : 0.49497 Variance : 0.00084 S.D. : 0.02896 Skewed Coef. : 0.00027 Kurtosis Coef. : 2.98851 MAD : 0.02312 Range : 0.31107 Mid_range : 0.50002 Median : 0.49667 Q1 : 0.47711 Q2 : 0.49667 Q3 : 0.51623 IQR : 0.03912 C.V. : 0.05831

1.2) $X_1,...,X_n \overset{iid}{\sim} Normal\left(\mu = 2, \sigma^2 = 5^2\right), \sigma_X = 5,$

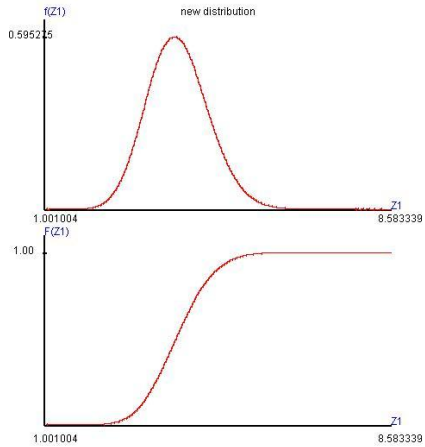
1.2.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	3.56846
	Geometrical Mean :	3.30513
	Harmonic Mean :	3.00849
	Variance :	1.77355
	S.D. :	1.33175
	Skewed Coef. :	0.47954
	Kurtosis Coef. :	3.19817
	MAD :	1.06411
	Range :	13.79806
	Mid_range :	6.92754
	Median :	3.45920
	Q1 :	2.60477
	Q2 :	3.45920
	Q3 :	4.41223
	IQR :	1.80746
	C.V. :	0.37320

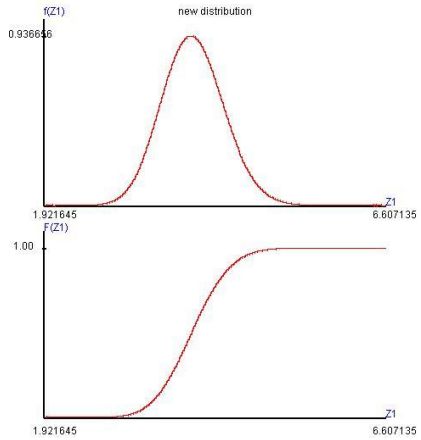
1.2.2n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	3.78476
	Geometrical Mean :	3.66326
	Harmonic Mean :	3.53622
	Variance :	0.89737
	S.D. :	0.94730
	Skewed Coef. :	0.32606
	Kurtosis Coef. :	3.09290
	MAD :	0.75630
	Range :	9.89153
	Mid_range :	5.30890
	Median :	3.73254
	Q1 :	3.11582
	Q2 :	3.73254
	Q3 :	4.39686
	IQR :	1.28104
	C.V. :	0.25029

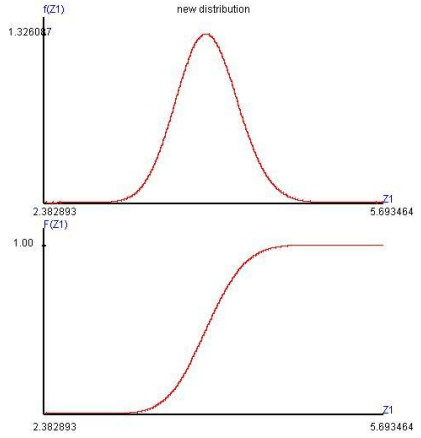
1.2.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	3.88838
	Geometrical Mean :	3.82967
	Harmonic Mean :	3.76980
	Variance :	0.45137
	S.D. :	0.67184
	Skewed Coef. :	0.22655
	Kurtosis Coef. :	3.04476
	MAD :	0.53619
	Range :	7.61052
	Mid_range :	4.79217
	Median :	3.86283
	Q1 :	3.42085
	Q2 :	3.86283
	Q3 :	4.32799
	IQR :	0.90715
	C.V. :	0.17278

1.2.4)n=50

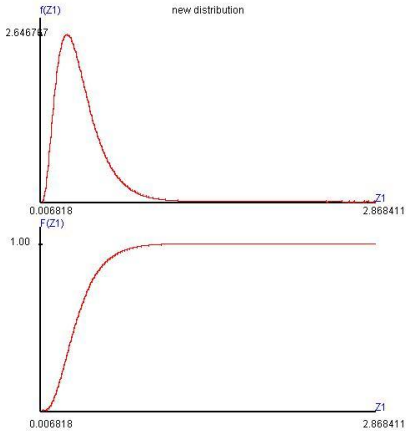
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 3.94933 Geometrical Mean : 3.92628 Harmonic Mean : 3.90307 Variance : 0.18124 S.D. : 0.42573 Skewed Coef. : 0.14211 Kurtosis Coef. : 3.01824 MAD : 0.33972 Range : 4.70291 Mid_range : 4.26439 Median : 3.93923 Q1 : 3.65652 Q2 : 3.93923 Q3 : 4.23111 IQR : 0.57458 C.V. : 0.10780

1.2.5)n=100

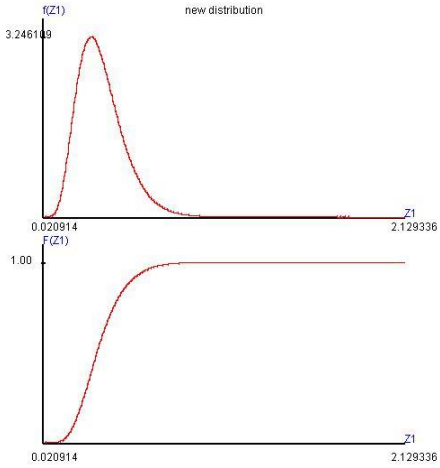
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 3.96945 Geometrical Mean : 3.95800 Harmonic Mean : 3.94650 Variance : 0.09075 S.D. : 0.30124 Skewed Coef. : 0.09929 Kurtosis Coef. : 3.00882 MAD : 0.24037 Range : 3.32288 Mid_range : 4.03818 Median : 3.96446 Q1 : 3.76351 Q2 : 3.96446 Q3 : 4.16997 IQR : 0.40646 C.V. : 0.07589

1.3) $X_1,...,X_n \overset{iid}{\sim} Shifted\_\exp onential(\lambda = 2, c = 1), \sigma_X = \frac{1}{\lambda} = 0.5$,

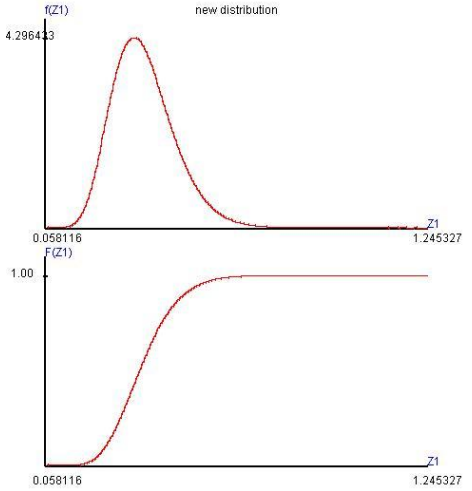
1.3.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.32770
	Geometrical Mean :	0.27899
	Harmonic Mean :	0.23068
	Variance :	0.03481
	S.D. :	0.18657
	Skewed Coef. :	1.32242
	Kurtosis Coef. :	5.86349
	MAD :	0.14283
	Range :	2.87223
	Mid_range :	1.43761
	Median :	0.29016
	Q1 :	0.19291
	Q2 :	0.29016
	Q3 :	0.42141
	IQR :	0.22851
	C.V. :	0.56932

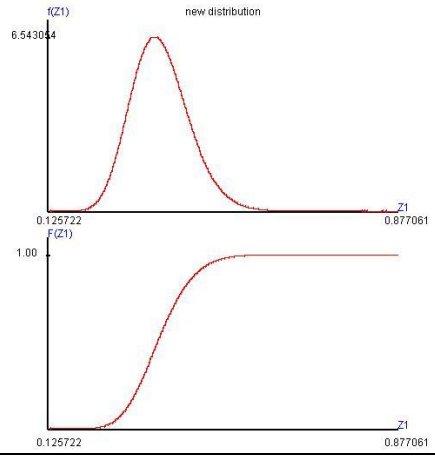
1.3.2n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.34867
	Geometrical Mean :	0.32328
	Harmonic Mean :	0.29805
	Variance :	0.01850
	S.D. :	0.13600
	Skewed Coef. :	0.90843
	Kurtosis Coef. :	4.35316
	MAD :	0.10630
	Range :	2.11626
	Mid_range :	1.07512
	Median :	0.32903
	Q1 :	0.25043
	Q2 :	0.32903
	Q3 :	0.42546
	IQR :	0.17503
	C.V. :	0.39004

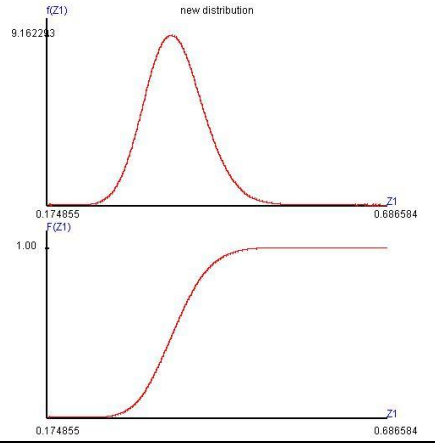
1.3.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.35849
	Geometrical Mean :	0.34553
	Harmonic Mean :	0.33262
	Variance :	0.00949
	S.D. :	0.09743
	Skewed Coef. :	0.63181
	Kurtosis Coef. :	3.65098
	MAD :	0.07695
	Range :	1.19162
	Mid_range :	0.65172
	Median :	0.34847
	Q1 :	0.28881
	Q2 :	0.34847
	Q3 :	0.41722
	IQR :	0.12841
	C.V. :	0.27178

1.3.4)n=50

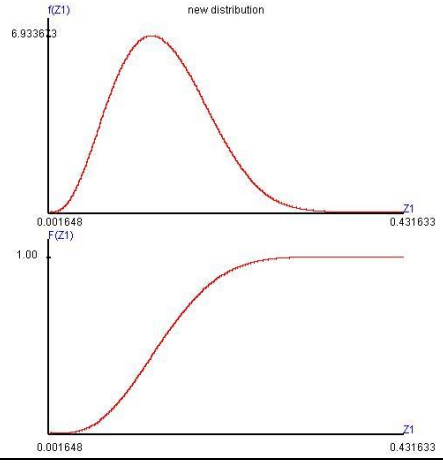
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.36417 Geometrical Mean : 0.35893 Harmonic Mean : 0.35369 Variance : 0.00385 S.D. : 0.06207 Skewed Coef. : 0.39522 Kurtosis Coef. : 3.25546 MAD : 0.04932 Range : 0.75413 Mid_range : 0.50139 Median : 0.36013 Q1 : 0.32049 Q2 : 0.36013 Q3 : 0.40344 IQR : 0.08295 C.V. : 0.17044

1.3.5)n=100

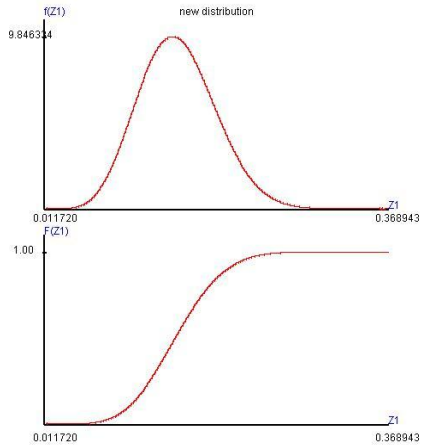
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.36604 Geometrical Mean : 0.36340 Harmonic Mean : 0.36077 Variance : 0.00194 S.D. : 0.04399 Skewed Coef. : 0.27891 Kurtosis Coef. : 3.12649 MAD : 0.03503 Range : 0.51363 Mid_range : 0.43072 Median : 0.36399 Q1 : 0.33539 Q2 : 0.36399 Q3 : 0.39447 IQR : 0.05907 C.V. : 0.12019

1.4) $X_1,...,X_n \overset{iid}{\sim} Pareto1(\lambda=3, c=1), \sigma_X = \frac{\lambda}{(\lambda+1)^2 \times (\lambda+2)} \times c^2 = \frac{3}{36} = \frac{1}{12},,$

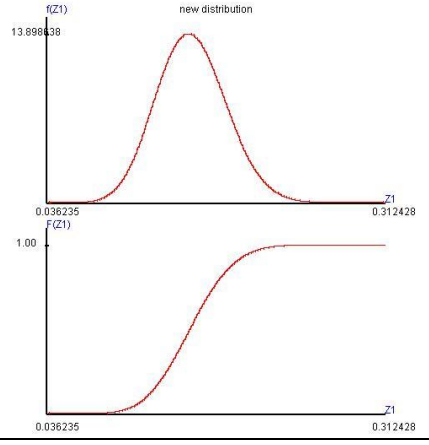
1.4.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.13887
	Geometrical Mean :	0.12683
	Harmonic Mean :	0.11285
	Variance :	0.00306
	S.D. :	0.05530
	Skewed Coef. :	0.38930
	Kurtosis Coef. :	2.86712
	MAD :	0.04478
	Range :	0.43158
	Mid_range :	0.21664
	Median :	0.13483
	Q1 :	0.09781
	Q2 :	0.13483
	Q3 :	0.17564
	IQR :	0.07783
	C.V. :	0.39824

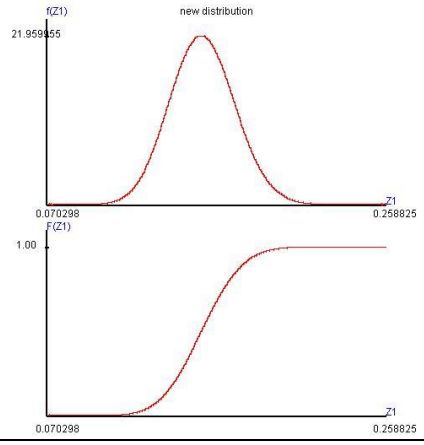
1.4.2n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.14864
	Geometrical Mean :	0.14305
	Harmonic Mean :	0.13706
	Variance :	0.00159
	S.D. :	0.03983
	Skewed Coef. :	0.24420
	Kurtosis Coef. :	2.91196
	MAD :	0.03199
	Range :	0.35855
	Mid_range :	0.19033
	Median :	0.14695
	Q1 :	0.12037
	Q2 :	0.14695
	Q3 :	0.17506
	IQR :	0.05469
	C.V. :	0.26797

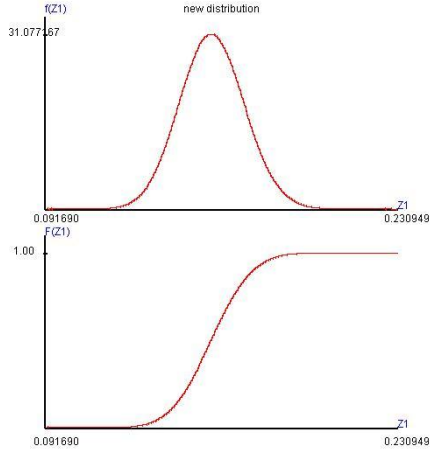
1.4.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.15344
	Geometrical Mean :	0.15074
	Harmonic Mean :	0.14795
	Variance :	0.00081
	S.D. :	0.02844
	Skewed Coef. :	0.16037
	Kurtosis Coef. :	2.94877
	MAD :	0.02277
	Range :	0.27722
	Mid_range :	0.17433
	Median :	0.15267
	Q1 :	0.13366
	Q2 :	0.15267
	Q3 :	0.17237
	IQR :	0.03871
	C.V. :	0.18537

1.4.4)n=50

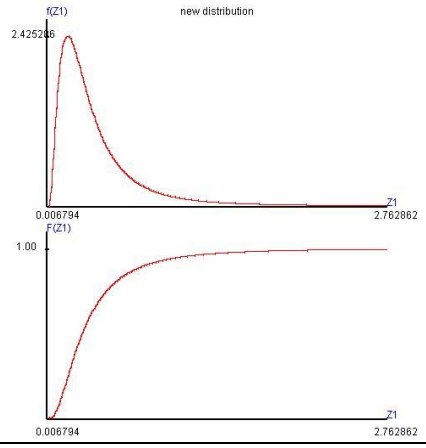
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.15630 Geometrical Mean : 0.15525 Harmonic Mean : 0.15417 Variance : 0.00033 S.D. : 0.01809 Skewed Coef. : 0.09700 Kurtosis Coef. : 2.97873 MAD : 0.01446 Range : 0.18923 Mid_range : 0.16456 Median : 0.15601 Q1 : 0.14390 Q2 : 0.15601 Q3 : 0.16839 IQR : 0.02449 C.V. : 0.11576

1.4.5)n=100

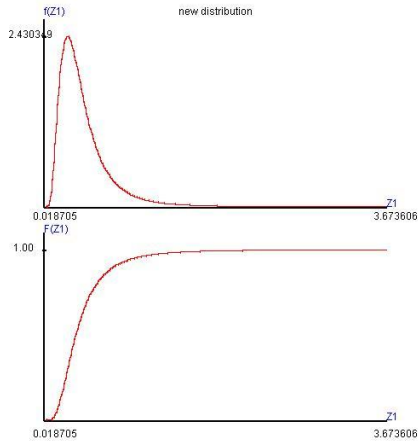
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.15725 Geometrical Mean : 0.15673 Harmonic Mean : 0.15620 Variance : 0.00016 S.D. : 0.01282 Skewed Coef. : 0.06715 Kurtosis Coef. : 2.98956 MAD : 0.01024 Range : 0.13978 Mid_range : 0.16132 Median : 0.15711 Q1 : 0.14851 Q2 : 0.15711 Q3 : 0.16584 IQR : 0.01733 C.V. : 0.08153

1.5) $X_1,...,X_n \overset{iid}{\sim} Pareto2(\lambda=3,c=1), \sigma_X = \frac{\lambda}{(\lambda-1)^2\times(\lambda-2)}\times c^2 = \frac{3}{4} = 0.75,,$

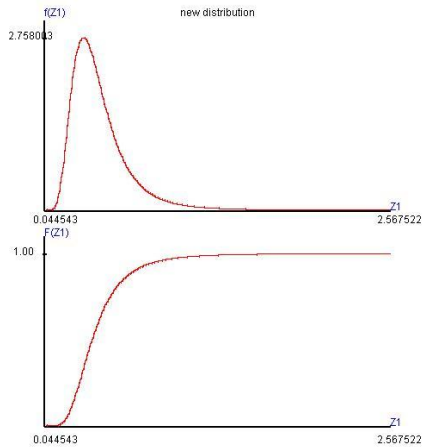
1.5.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.40631
	Geometrical Mean :	0.28889
	Harmonic Mean :	0.20990
	Variance :	0.23183
	S.D. :	0.48148
	Skewed Coef. :	15.92625
	Kurtosis Coef. :	1589.87251
	MAD :	0.25983
	Range :	170.75057
	Mid_range :	85.37676
	Median :	0.28567
	Q1 :	0.17017
	Q2 :	0.28567
	Q3 :	0.48335
	IQR :	0.31319
	C.V. :	1.18502

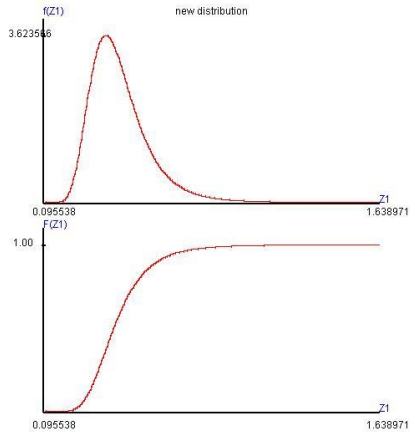
1.5.2n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.43070
	Geometrical Mean :	0.35481
	Harmonic Mean :	0.29951
	Variance :	0.13091
	S.D. :	0.36182
	Skewed Coef. :	13.52265
	Kurtosis Coef. :	1272.55864
	MAD :	0.20999
	Range :	127.53558
	Mid_range :	63.77944
	Median :	0.34652
	Q1 :	0.23776
	Q2 :	0.34652
	Q3 :	0.51427
	IQR :	0.27652
	C.V. :	0.84007

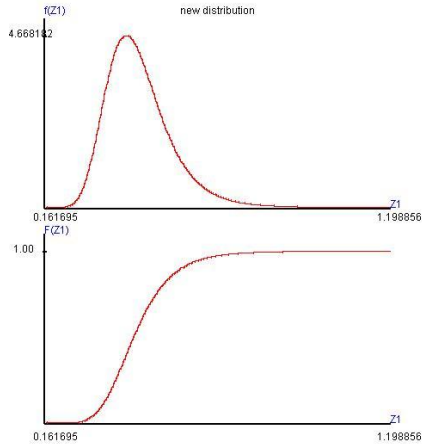
1.5.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.43966
	Geometrical Mean :	0.39438
	Harmonic Mean :	0.35882
	Variance :	0.06654
	S.D. :	0.25795
	Skewed Coef. :	11.13158
	Kurtosis Coef. :	1101.39730
	MAD :	0.16050
	Range :	97.10230
	Mid_range :	48.59082
	Median :	0.38527
	Q1 :	0.29171
	Q2 :	0.38527
	Q3 :	0.51790
	IQR :	0.22619
	C.V. :	0.58671

1.5.4)n=50

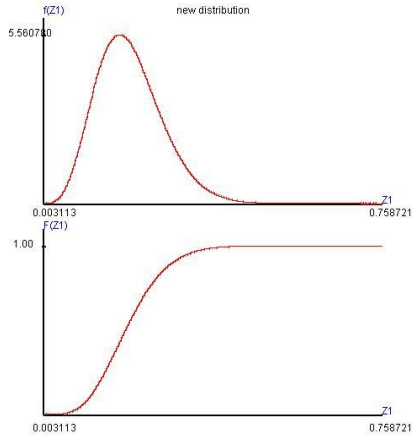
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.44334 Geometrical Mean : 0.42222 Harmonic Mean : 0.40425 Variance : 0.02578 S.D. : 0.16055 Skewed Coef. : 7.49563 Kurtosis Coef. : 548.64813 MAD : 0.10795 Range : 39.99053 Mid_range : 20.08782 Median : 0.41482 Q1 : 0.34431 Q2 : 0.41482 Q3 : 0.50643 IQR : 0.16212 C.V. : 0.36214

1.5.5)n=100

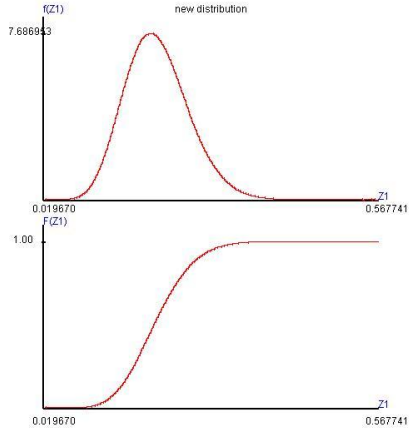
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.44412 Geometrical Mean : 0.43274 Harmonic Mean : 0.42258 Variance : 0.01247 S.D. : 0.11166 Skewed Coef. : 5.13660 Kurtosis Coef. : 280.48881 MAD : 0.07866 Range : 20.08574 Mid_range : 10.20257 Median : 0.42718 Q1 : 0.37249 Q2 : 0.42718 Q3 : 0.49459 IQR : 0.12211 C.V. : 0.25141

1.6) $X_1,...,X_n \overset{iid}{\sim} Rayleigh(\lambda=3, c=0), \sigma_X = \sqrt{\frac{4-\pi}{4}} \times \frac{1}{\lambda} = \sqrt{\frac{4-\pi}{4}} \times \frac{1}{3},,$

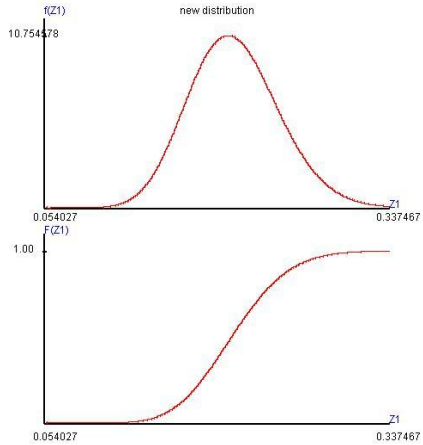
1.6.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.19106
	Geometrical Mean :	0.17633
	Harmonic Mean :	0.15999
	Variance :	0.00539
	S.D. :	0.07342
	Skewed Coef. :	0.56206
	Kurtosis Coef. :	3.35881
	MAD :	0.05846
	Range :	0.75842
	Mid_range :	0.38092
	Median :	0.18396
	Q1 :	0.13786
	Q2 :	0.18396
	Q3 :	0.23661
	IQR :	0.09874
	C.V. :	0.38430

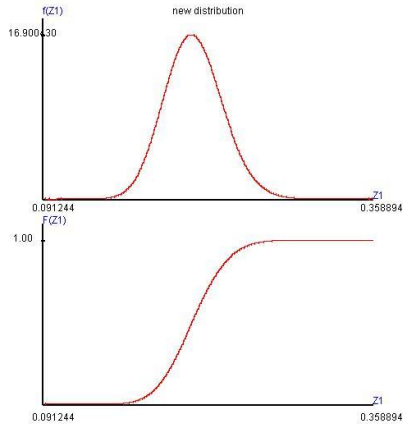
1.6.2n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.20327
	Geometrical Mean :	0.19639
	Harmonic Mean :	0.18925
	Variance :	0.00275
	S.D. :	0.05244
	Skewed Coef. :	0.38550
	Kurtosis Coef. :	3.17183
	MAD :	0.04179
	Range :	0.55011
	Mid_range :	0.29371
	Median :	0.19986
	Q1 :	0.16610
	Q2 :	0.19986
	Q3 :	0.23673
	IQR :	0.07063
	C.V. :	0.25796

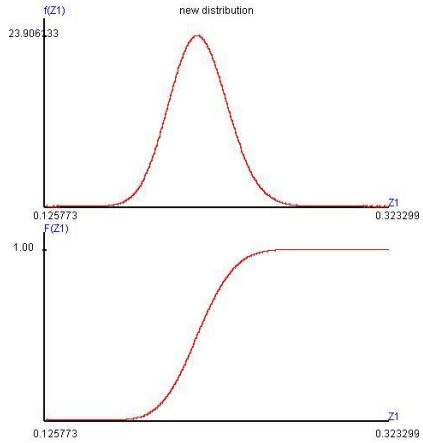
1.6.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.20920
	Geometrical Mean :	0.20585
	Harmonic Mean :	0.20245
	Variance :	0.00139
	S.D. :	0.03727
	Skewed Coef. :	0.26865
	Kurtosis Coef. :	3.08333
	MAD :	0.02972
	Range :	0.41569
	Mid_range :	0.26133
	Median :	0.20752
	Q1 :	0.18316
	Q2 :	0.20752
	Q3 :	0.23340
	IQR :	0.05024
	C.V. :	0.17817

1.6.4)n=50

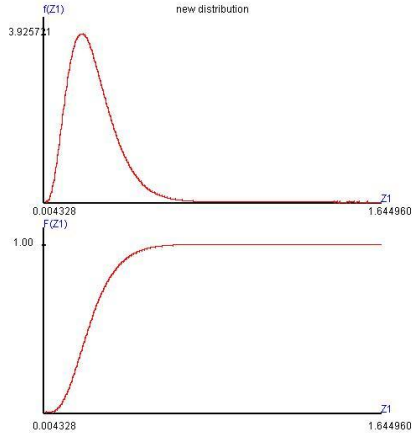
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.21269
	Geometrical Mean :	0.21137
	Harmonic Mean :	0.21004
	Variance :	0.00056
	S.D. :	0.02364
	Skewed Coef. :	0.16857
	Kurtosis Coef. :	3.03212
	MAD :	0.01886
	Range :	0.26865
	Mid_range :	0.22507
	Median :	0.21202
	Q1 :	0.19638
	Q2 :	0.21202
	Q3 :	0.22827
	IQR :	0.03189
	C.V. :	0.11117

1.6.5)n=100

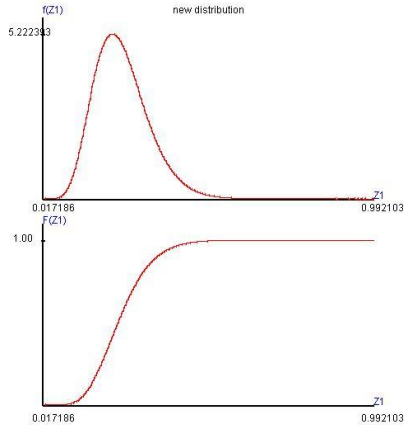
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.21384
	Geometrical Mean :	0.21319
	Harmonic Mean :	0.21253
	Variance :	0.00028
	S.D. :	0.01673
	Skewed Coef. :	0.11851
	Kurtosis Coef. :	3.01593
	MAD :	0.01335
	Range :	0.19826
	Mid_range :	0.22454
	Median :	0.21351
	Q1 :	0.20238
	Q2 :	0.21351
	Q3 :	0.22495
	IQR :	0.02257
	C.V. :	0.07826

1.7) $X_1,...,X_n \overset{iid}{\sim} DE(\lambda=4,\mu=1), \sigma_X = \sqrt{2}\times\frac{1}{\lambda}=\frac{\sqrt{2}}{4},,$

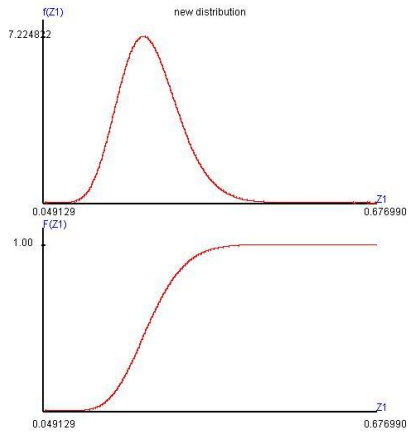
1.7.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.23520
	Geometrical Mean :	0.20838
	Harmonic Mean :	0.18042
	Variance :	0.01297
	S.D. :	0.11387
	Skewed Coef. :	0.99839
	Kurtosis Coef. :	4.57184
	MAD :	0.08887
	Range :	1.64673
	Mid_range :	0.82464
	Median :	0.21695
	Q1 :	0.15217
	Q2 :	0.21695
	Q3 :	0.29835
	IQR :	0.14618
	C.V. :	0.48416

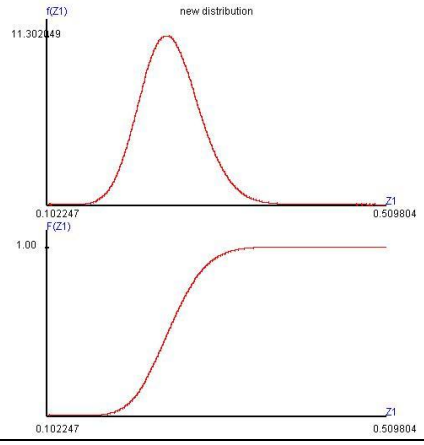
1.7.2)n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.24474
	Geometrical Mean :	0.23166
	Harmonic Mean :	0.21837
	Variance :	0.00648
	S.D. :	0.08052
	Skewed Coef. :	0.67650
	Kurtosis Coef. :	3.71672
	MAD :	0.06359
	Range :	0.97854
	Mid_range :	0.50464
	Median :	0.23583
	Q1 :	0.18681
	Q2 :	0.23583
	Q3 :	0.29297
	IQR :	0.10616
	C.V. :	0.32900

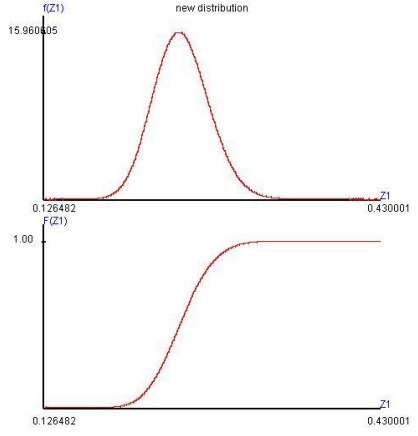
1.7.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	0.24810
	Geometrical Mean :	0.24168
	Harmonic Mean :	0.23521
	Variance :	0.00321
	S.D. :	0.05662
	Skewed Coef. :	0.46502
	Kurtosis Coef. :	3.33333
	MAD :	0.04495
	Range :	0.63020
	Mid_range :	0.36306
	Median :	0.24374
	Q1 :	0.20796
	Q2 :	0.24374
	Q3 :	0.28350
	IQR :	0.07554
	C.V. :	0.22819

1.7.4)n=50

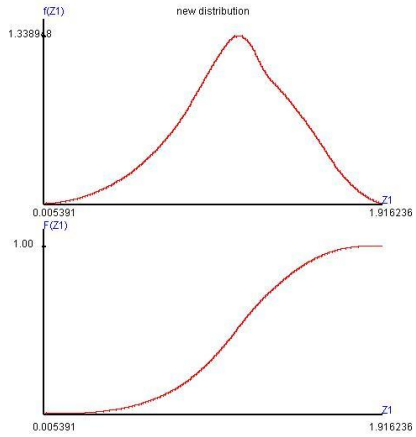
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.24950 Geometrical Mean : 0.24697 Harmonic Mean : 0.24443 Variance : 0.00127 S.D. : 0.03558 Skewed Coef. : 0.28801 Kurtosis Coef. : 3.12665 MAD : 0.02834 Range : 0.41376 Mid_range : 0.30643 Median : 0.24780 Q1 : 0.22468 Q2 : 0.24780 Q3 : 0.27248 IQR : 0.04780 C.V. : 0.14262

1.7.5)n=100

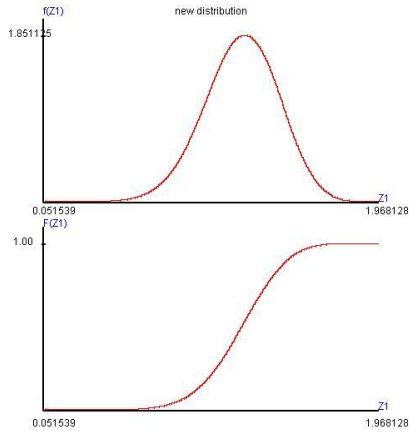
$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient
	Mathematical Mean: 0.24983 Geometrical Mean : 0.24857 Harmonic Mean : 0.24731 Variance : 0.00063 S.D. : 0.02510 Skewed Coef. : 0.20256 Kurtosis Coef. : 3.06142 MAD : 0.02001 Range : 0.30465 Mid_range : 0.27824 Median : 0.24898 Q1 : 0.23247 Q2 : 0.24898 Q3 : 0.26626 IQR : 0.03379 C.V. : 0.10045

1.8) $X_1,...,X_n \overset{iid}{\sim} Arc\sin(\mu=1, c=2), \sigma_X = \sqrt{\frac{c^2}{2}} = \sqrt{2},$

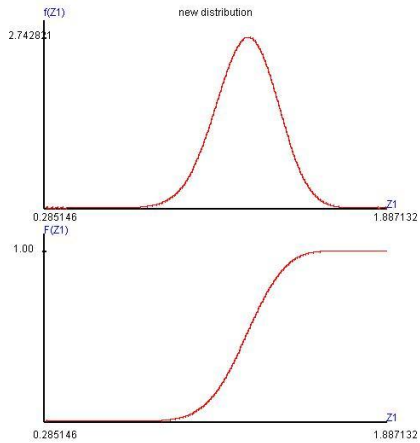
1.8.1)n=5

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	1.08440
	Geometrical Mean :	1.02631
	Harmonic Mean :	0.94373
	Variance :	0.10245
	S.D. :	0.32008
	Skewed Coef. :	-0.23571
	Kurtosis Coef. :	2.81483
	MAD :	0.25524
	Range :	1.91795
	Mid_range :	0.96081
	Median :	1.09488
	Q1 :	0.87999
	Q2 :	1.09488
	Q3 :	1.30902
	IQR :	0.42904
	C.V. :	0.29517

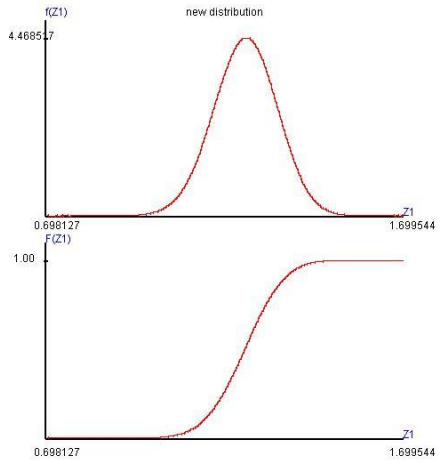
1.8.2)n=10

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	1.17824
	Geometrical Mean :	1.15733
	Harmonic Mean :	1.13423
	Variance :	0.04570
	S.D. :	0.21377
	Skewed Coef. :	-0.21028
	Kurtosis Coef. :	2.98849
	MAD :	0.17097
	Range :	1.92371
	Mid_range :	1.00983
	Median :	1.18550
	Q1 :	1.03742
	Q2 :	1.18550
	Q3 :	1.32761
	IQR :	0.29019
	C.V. :	0.18143

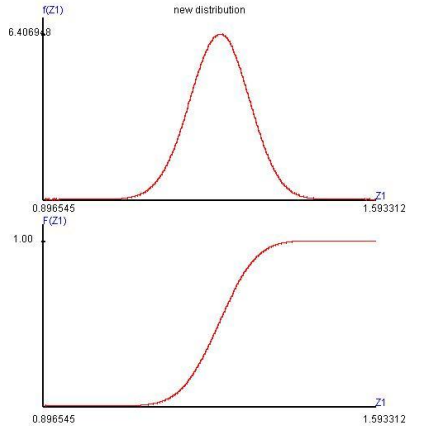
1.8.3)n=20

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	1.22562
	Geometrical Mean :	1.21677
	Harmonic Mean :	1.20759
	Variance :	0.02105
	S.D. :	0.14507
	Skewed Coef. :	-0.14546
	Kurtosis Coef. :	2.99814
	MAD :	0.11588
	Range :	1.60794
	Mid_range :	1.08614
	Median :	1.22905
	Q1 :	1.12936
	Q2 :	1.22905
	Q3 :	1.32570
	IQR :	0.19634
	C.V. :	0.11837

1.8.4)n=50

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	1.25416
	Geometrical Mean :	1.25097
	Harmonic Mean :	1.24773
	Variance :	0.00793
	S.D. :	0.08904
	Skewed Coef. :	-0.08275
	Kurtosis Coef. :	2.99128
	MAD :	0.07109
	Range :	1.00514
	Mid_range :	1.19884
	Median :	1.25538
	Q1 :	1.19467
	Q2 :	1.25538
	Q3 :	1.31498
	IQR :	0.12032
	C.V. :	0.07100

1.8.5)n=100

$f_{Z_1}(z_1), F_{Z_1}(z_1)$	Coefficient	
	Mathematical Mean:	1.26370
	Geometrical Mean :	1.26216
	Harmonic Mean :	1.26060
	Variance :	0.00388
	S.D. :	0.06227
	Skewed Coef. :	-0.05445
	Kurtosis Coef. :	2.99271
	MAD :	0.04971
	Range :	0.69936
	Mid_range :	1.24493
	Median :	1.26426
	Q1 :	1.22196
	Q2 :	1.26426
	Q3 :	1.30605
	IQR :	0.08409
	C.V. :	0.04928