Table 1: Outputs on d1.txt. Confidence Interval at $c = 0.95$ is [0.3595729114440214, 0.3739496902557991] for λ in $Exp(\lambda)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Exponential [0.3667613]	-20030.44048936576	0.9981260802859298	0.36807302288319077	1.0	[7653.8077283 12013.98428621]
Normal [2.72656902 2.70417551]	-27684.248217664303	1.0	1.2448908485395242e-213	9.85230...e-3325	[-7653.8077283 4360.17655791]
Uniform [1.42147e-04 2.46419e+01]	-32044.424775573287	0.0	0.0	1.41861...e-4932	[-12013.98428621 -4360.17655791]

Table 2: Outputs on d2.txt. Confidence Interval at $c = 0.95$ is [2.7100346484318325, 2.7266253515681673] for a and [3.133274648431833, 3.1498653515681676] for b in $Uniform(a, b)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Uniform [2.71833 3.14157]	8598.158849461757	1.0	0.0	1.0	[7881.66279607 29344.99658236]
Normal [2.92906651 0.12206068]	716.4960533918621	1.0	1.2926467848999637e-26	1.08978...e-3423	[-7881.66279607 21463.33378629]
Exponential [0.3414057]	-20746.83773289431	0.0	0.0	0.0	[-29344.99658236 -21463.33378629]

Table 3: Outputs on d3.txt. Confidence Interval at $c = 0.95$ is [2.641907065522342, 2.765400464393057] for μ and [3.1200908941338077, 3.1807085003864715] for v in $\mathcal{N}(\mu, v)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Normal [2.70365376 3.1503997]	-30679.03048238257	1.0	0.8351413598816311	1.0	[724.66654471 187841.26468958]
Uniform [-8.36011 14.7523]	-31403.697027089074	0.0	0.0	1.91125...e-315	[-724.66654471 187116.59814487]
Exponential [0.36986985]	-218520.29517196323	0.0	0.0	0.0	[-187841.26468958 -187116.59814487]

Table 4: Outputs on d4.txt. Confidence Interval at $c = 0.95$ is [0.3396309232198685, 0.38451300410267103] λ in $\mathcal{N}(\lambda)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Exponential [0.36207196]	-2015.912292268661	0.999460153158885	0.65138160659024	1.0	[784.07379121 943.8952388]
Normal [2.76188189 2.75036241]	-2799.9860834757033	0.9999999999999999	3.5465063184349558e-22	3.02746...e-341	[-784.07379121 159.8214476]
Uniform [1.42147e-04 1.92944e+01]	-2959.8075310728664	0.0	0.0	1.17897...e-410	[-943.8952388 -159.8214476]

Table 5: Outputs on d5.txt. Confidence Interval at $c = 0.95$ is [2.692416388903711, 2.744843611096289] for a and [3.1153563889037112, 3.167783611096289] for b in $Uniform(a, b)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Uniform [2.71863 3.14157]	860.5249539682978	1.0	0.0	1.0	[780.32973839 2934.56389935]
Normal [2.92717837 0.12021403]	80.19521557697243	1.0	0.00132724381968842	1.27967...e-339	[-780.32973839 2154.23416096]
Exponential [0.34162592]	-2074.0389453815387	0.0	0.0	3.42840...e-1275	[-2934.56389935 -2154.23416096]

Table 6: Outputs on d6.txt. Confidence Interval at $c = 0.95$ is [-8.00087678155711, -5.585663218442889] for a and [11.483093218442889, 13.89830678155711] for b in $Uniform(a, b)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Uniform [-6.79327 12.6907]	-2969.5920762182077	0.5673573500410048	8.090887954417715e-100	1.0	[163.32201982 20128.29808345]
Normal [2.66647823 3.24946176]	-3132.914096039013	1.0	0.854324730425742	1.17529...e-71	[-163.32201982 19964.97606363]
Exponential [0.3750265]	-23097.890159666185	1.3535839116229909e-12	0.0	0.0	[-20128.29808345 -19964.97606363]

Table 7: Outputs on d7.txt. Confidence Interval at $c = 0.95$ is [0.3071929655910226, 0.4569652172836074] for λ in $Exp(\lambda)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Exponential [0.38207909]	-196.21276461575272	0.9796624831847708	0.3965783676414079	1.0	[83.49216669 86.89953028]
Normal [2.61725915 2.7460559]	-279.7049313055413	1.0	0.00013850642618806272	5.49303...e-37	[-83.49216669 3.40736359]
Uniform [0.0204996 16.985]	-283.1122948937256	0.0	5.18130697030508e-36	1.81975...e-38	[-86.89953028 -3.40736359]

Table 8: Outputs on d8.txt. Confidence Interval at $c = 0.95$ is [2.636916750164251, 2.801283249835749] for a and [3.056226750164251, 3.220593249835749] for b in $Uniform(a, b)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Uniform [2.7191 3.13841]	86.91447758172131	1.0	1.010191373450513e-87	1.0	[75.58047177 294.53477066]
Normal [2.9335196 0.11328564]	11.334005809517844	1.0	0.41028398259053767	1.49905...e-33	[-75.58047177 218.95429889]
Exponential [0.34088744]	-207.62029308000115	0.0	7.364216270920552e-88	1.21667...e-128	[-294.53477066 -218.95429889]

Table 9: Outputs on d9.txt. Confidence Interval at $c = 0.95$ is [-10.214949644678228, -3.371590355321772] for a and [7.242920355321772, 14.086279644678228] for b in $Uniform(a, b)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Uniform [-6.79327 10.6646]	-285.9790549842543	0.6751914007739771	1.6670536842202188e-19	0.99999...	[24.40960181 2333.42556684]
Normal [2.49358449 3.20514023]	-310.3886567960105	1.0	0.9581311462793116	2.50636...e-11	[-24.40960181 2309.01596503]
Exponential [0.40102912]	-2619.40462182386	1.3929874771223538e-05	1.1495671776857861e-60	4.03787...e-1014	[-2333.42556684 -2309.01596503]

Table 10: Outputs on d10.txt. Confidence Interval at $c = 0.95$ is [0.14827466149179994, 0.631697585533519] for λ in $Exp(\lambda)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Exponential [0.38998612]	-19.416441212254206	0.973439173433814	0.8319877168460819	0.60512...	[0.44163435 4.65076727]
Uniform [0.186992 7.47192]	-19.858075562764334	0.7931802434304355	0.018599556909482003	0.38908...	[-0.44163435 4.20913292]
Normal [2.5641938 2.19114184]	-24.067208486795643	1.0	0.2530357752999524	0.00578...	[-4.65076727 -4.20913292]

Table 11: Outputs on d11.txt. Confidence Interval at $c = 0.95$ is [2.51725204245966, 2.97350795754034] for a and [2.8853220424596597, 3.34157795754034] for b in $Uniform(a, b)$.

Distribution	**Log-likelihood**	**Z-test P-value**	**KS-test P-value**	**MLE Posterior**	**Bayes Factor (K)**
Uniform [2.74538 3.11345]	9.994821415109362	1.0	1.0663919057133492e-09	0.99983...	[8.7339254 30.7355034]
Normal [2.927264 0.11071746]	1.260896018750001	1.0	0.8895929430669238	0.000161...	[-8.7339254 22.001578]
Exponential [0.34161593]	-20.740681983810887	2.348787830896981 2e-11	1.0605705564213617e-09	4.48405...e-14	[-30.7355034 -22.001578]

Table 12: Outputs on d12.txt. Confidence Interval at $c = 0.95$ is [-14.25523650987786, 0.6686965098778623] for a and [-2.2158265098778624, 12.708106509877862] for b in $Uniform(a, b)$.

Distribution	**Log-likelihood**	**Z-test P-value**	**KS-test P-value**	**MLE Posterior**	**Bayes Factor (K)**
Uniform [-6.79327 5.24614]	-24.88185435357714	1.0	2.207999999999995e-07	0.99985...3	[8.8705186 299.53914985]
Normal [1.0733089 3.62479875]	-33.752372950603196	1.0	0.6996056374868675	0.0001404...	[-8.8705186 290.66863125]
Exponential [0.93169823]	-324.42100420340705	0.664116914041963	4.98355...e-09	8.160919712854889 5357e-131	[-299.53914985 -290.66863125]

Table 13: Outputs on true distribution $\mathcal{N}(1.8, 1.5)$. Confidence Interval at $c = 0.95$ is [1.766264537200207, 1.8243113270727358] for μ and [1.4623858108799754, 1.4992395215442205] for v in $\mathcal{N}(\mu, v)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Normal [1.79528793 1.48081267]	-18556.403842449236	1.0	0.7524434734532423	1.0	[4703.07343017 115903.57097243]
Uniform [-3.34099054 6.89538625]	-23259.47727261518	0.6456846375709944	0.0	3.02803...e-2043	[-4703.07343017 111200.49754227]
Exponential [0.55701371]	-134459.97481488308	0.0	0.0	0.0	[-115903.57097243 -111200.49754227]

Table 14: Outputs on true distribution $Uniform(0.0, 4.0)$. Confidence Interval at $c = 0.95$ is [-0.07834808434667095, 0.07842535340360868] for a and [3.9210477970799404, 4.07782123483022] for b in $Uniform(a, b)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Uniform [3.86345285e-05 3.99943452]	-13861.433200704181	0.9089823453239914	0.4789085382876377	1.0	[1718.37630703 3089.52330019]
Normal [2.00390074 1.143762]	-15579.8095077379	1.0	3.2793709867596784e-28	5.23181...e-747	[-1718.37630703 1371.14699316]
Exponential [0.49902671]	-16950.95650089728	0.9983350287687442	9.92515009744304e-221	1.72615...e-1342	[-3089.52330019 -1371.14699316]

Table 15: Outputs on true distribution $Exp(1.3)$. Confidence Interval at $c = 0.95$ is [1.2831280542109935, 1.334431274324253] for λ in $Exp(\lambda)$.

Distribution	Log-likelihood	Z-test P-value	KS-test P-value	MLE Posterior	Bayes Factor (K)
Exponential [1.30877966]	-7309.048509471736	0.9894106613100625	0.9728757950151803	1.0	[4319.4419267 14583.60713162]
Normal [0.76407055 0.76097534]	-11628.490436171742	0.9999999999999999	2.0361577518490562e-216	1.23085...e-1876	[-4319.4419267 10264.16520492]
Uniform [6.23766342e-05 8.92871556]	-21892.655641092813	0.0	0.0	1.41861...e-4932	[-14583.60713162 -10264.16520492]