

FUNÇÃO DE DISTRIBUIÇÃO NORMAL OU DE GAUSS

Distribuição de frequências dos totais anuais de chuva (1974 – 2000) – município de Acaraú – CE.

I. C. (mm)	f_i	x_i	$f_i \cdot x_i$	Z_d	F(z) tab.	p(z)	F. esp.	F.acum.	F(z) esp.	F(z) esp. – F(z) tab.
[0 – 500)	3	250	750	-1,04	0,14917	0,14917	4,028	3	0,1071	0,0420
[500 – 1000)	10	750	7.500	-0,20	0,42074	0,27157	7,332	13	0,4643	0,0435
[1000 – 1500)	8	1250	10.000	0,63	0,73565	0,31491	8,503	21	0,7500	0,0144
[1500 – 2000)	4	1750	7.000	1,47	0,92921	0,19356	5,226	25	0,8929	0,0364
[2000 – 2500)	1	2250	2.250	2,31	0,98955	0,06034	1,629	26	0,9286	0,0610
[2500 – 3000)	1	2750	2.750	3,14	0,99915	0,00960	0,259	27	0,9643	0,0349

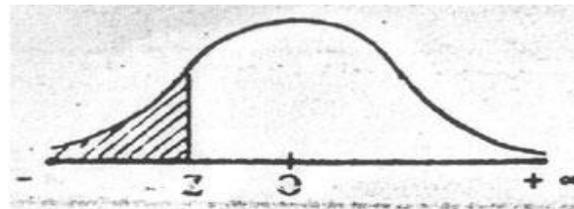
Média (μ) = 1120,4 e Desvio-padrão (σ) = 597,9.

Teste do qui-quadrado: G.L. do qui-quadrado = 5 – 2 – 1 = 2 G.L. Qui-quadrado tab. $(0,95) = 5,99$.

Qui-quadrado calculado = 1,56. Portanto, os dados se ajustam a uma função de distribuição normal ou de Gauss.

Teste não-paramétrico de Smirnov-Kolmogorov: $D_{\text{crítico}}$ para $n = 27$ e nível de significância de 95% de probabilidade = 0,254.

Como $D_{\text{crítico}} (0,254) > D_{\text{obs.}} (0,0610)$, os dados de totais anuais de chuva se ajustam a uma distribuição normal ou de Gauss.



AREAS SOB A CURVA NORMAL

Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-0.0	.50000	.49601	.49202	.48803	.48404	.48006	.47607	.47209	.46811	.46414
-0.1	.46017	.45620	.45224	.44828	.44433	.44038	.43644	.43250	.42857	.42465
-0.2	.42074	.41683	.41293	.40904	.40516	.40129	.39743	.39358	.38973	.38590
-0.3	.38208	.37828	.37448	.37070	.36692	.36316	.35942	.35569	.35197	.34826
-0.4	.34457	.34090	.33724	.33359	.32996	.32635	.32275	.31917	.31561	.31206
-0.5	.30853	.30502	.30153	.29805	.29459	.29115	.28773	.28433	.28095	.27759
-0.6	.27425	.27093	.26762	.26434	.26108	.25784	.25462	.25142	.24825	.24509
-0.7	.24196	.23885	.23576	.23269	.22965	.22662	.22362	.22065	.21769	.21476
-0.8	.21185	.20897	.20610	.20326	.20045	.19766	.19489	.19215	.18942	.18673
-0.9	.18406	.18141	.17878	.17618	.17360	.17105	.16852	.16602	.16354	.16108
-1.0	.15865	.15624	.15386	.15150	.14917	.14685	.14457	.14230	.14007	.13785
-1.1	.13566	.13349	.13135	.12923	.12714	.12507	.12302	.12100	.11900	.11702
-1.2	.11506	.11313	.11123	.10934	.10748	.10565	.10383	.10204	.10027	.09852
-1.3	.09680	.09509	.09341	.09175	.09012	.08850	.08691	.08534	.08379	.08226
-1.4	.08075	.07927	.07780	.07635	.07493	.07352	.07214	.07078	.06943	.06811
-1.5	.06680	.06552	.06425	.06300	.06178	.06057	.05938	.05820	.05705	.05591
-1.6	.05479	.05369	.05261	.05155	.05050	.04947	.04845	.04745	.04647	.04551
-1.7	.04456	.04363	.04271	.04181	.04092	.04005	.03920	.03836	.03753	.03672
-1.8	.03593	.03514	.03437	.03362	.03288	.03215	.03144	.03074	.03005	.02937
-1.9	.02871	.02806	.02742	.02680	.02618	.02558	.02499	.02441	.02385	.02329
-2.0	.02275	.02221	.02169	.02117	.02067	.02018	.01969	.01922	.01876	.01830
-2.1	.01786	.01742	.01700	.01658	.01617	.01577	.01538	.01500	.01462	.01426
-2.2	.01390	.01355	.01320	.01287	.01254	.01222	.01191	.01160	.01130	.01101
-2.3	.01072	.01044	.01017	.00990	.00964	.00938	.00913	.00889	.00865	.00842
-2.4	.00819	.00797	.00776	.00754	.00734	.00714	.00694	.00675	.00656	.00638
-2.5	.00620	.00603	.00586	.00570	.00554	.00538	.00523	.00508	.00494	.00479
-2.6	.00466	.00452	.00439	.00426	.00414	.00402	.00390	.00379	.00368	.00357
-2.7	.00346	.00336	.00326	.00316	.00307	.00297	.00289	.00280	.00271	.00263
-2.8	.00255	.00247	.00240	.00232	.00225	.00218	.00211	.00205	.00198	.00192
-2.9	.00186	.00180	.00175	.00169	.00164	.00158	.00153	.00148	.00144	.00139
-3.0	.00135	.00130	.00126	.00122	.00118	.00114	.00110	.00107	.00103	.00100
-3.1	.00096	.00093	.00090	.00087	.00084	.00081	.00078	.00076	.00073	.00071
-3.2	.00068	.00066	.00064	.00061	.00059	.00057	.00055	.00053	.00051	.00050
-3.3	.00048	.00046	.00045	.00043	.00041	.00040	.00038	.00037	.00036	.00034
-3.4	.00033	.00032	.00031	.00030	.00029	.00028	.00027	.00026	.00025	.00024
-3.5	.00023	.00022	.00021	.00020	.00020	.00019	.00018	.00017	.00017	.00016
-3.6	.00015	.00015	.00014	.00014	.00013	.00013	.00012	.00012	.00011	.00011
-3.7	.00010	.00010	.00009	.00009	.00009	.00008	.00008	.00008	.00007	.00007
-3.8	.00007	.00006	.00006	.00006	.00006	.00005	.00005	.00005	.00005	.00005
-3.9	.00004	.00004	.00004	.00004	.00004	.00003	.00003	.00003	.00003	.00003

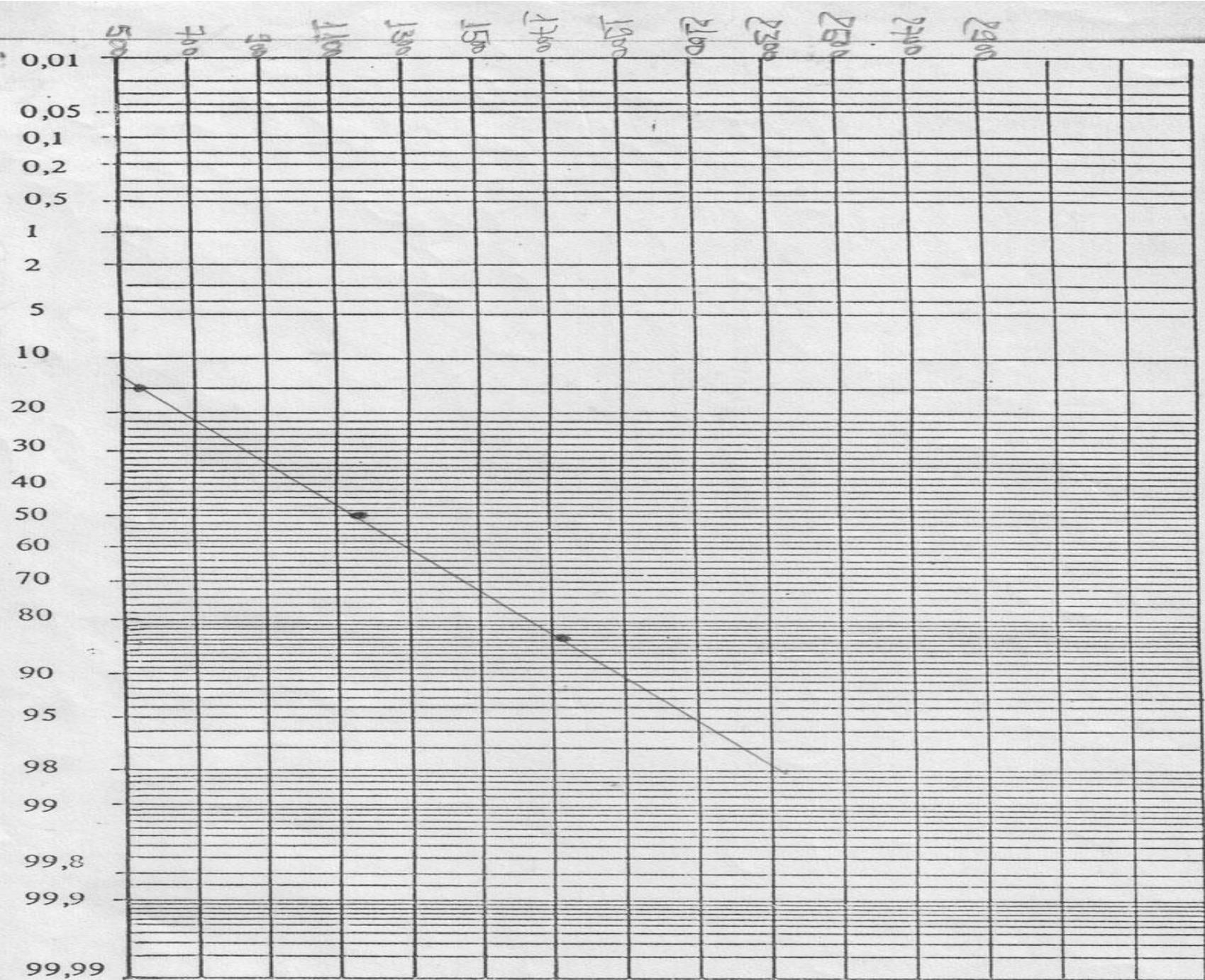


Fig. 4-16 - Papel da distribuição normal