

Cumulative Poisson Distribution Table

Table shows cumulative probability functions of Poisson Distribution with various α . Example: to find the probability $P(X \leq 3)$ where X has a Poisson Distribution with $\alpha = 2$, look in row 4 and column 4 to find $P(X \leq 3)=0.8571$ where X is Poisson(2).

x	α									
	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
0	0.6065	0.3679	0.2231	0.1353	0.0821	0.0498	0.0302	0.0183	0.0111	0.0067
1	0.9098	0.7358	0.5578	0.4060	0.2873	0.1991	0.1359	0.0916	0.0611	0.0404
2	0.9856	0.9197	0.8088	0.6767	0.5438	0.4232	0.3208	0.2381	0.1736	0.1247
3	0.9982	0.9810	0.9344	0.8571	0.7576	0.6472	0.5366	0.4335	0.3423	0.2650
4	0.9998	0.9963	0.9814	0.9473	0.8912	0.8153	0.7254	0.6288	0.5321	0.4405
5	1.0000	0.9994	0.9955	0.9834	0.9580	0.9161	0.8576	0.7851	0.7029	0.6160
6	1.0000	0.9999	0.9991	0.9955	0.9858	0.9665	0.9347	0.8893	0.8311	0.7622
7	1.0000	1.0000	0.9998	0.9989	0.9958	0.9881	0.9733	0.9489	0.9134	0.8666
8	1.0000	1.0000	1.0000	0.9998	0.9989	0.9962	0.9901	0.9786	0.9597	0.9319
9	1.0000	1.0000	1.0000	1.0000	0.9997	0.9989	0.9967	0.9919	0.9829	0.9682
10	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9990	0.9972	0.9933	0.9863
11	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9991	0.9976	0.9945
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9992	0.9980
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9993
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x	α									
	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
0	0.0041	0.0025	0.0015	0.0009	0.0006	0.0003	0.0002	0.0001	0.0001	0.0000
1	0.0266	0.0174	0.0113	0.0073	0.0047	0.0030	0.0019	0.0012	0.0008	0.0005
23	0.0884	0.0620	0.0430	0.0296	0.0203	0.0138	0.0093	0.0062	0.0042	0.0028
3	0.2017	0.1512	0.1118	0.0818	0.0591	0.0424	0.0301	0.0212	0.0149	0.0103
4	0.3575	0.2851	0.2237	0.1730	0.1321	0.0996	0.0744	0.0550	0.0403	0.0293
5	0.5289	0.4457	0.3690	0.3007	0.2414	0.1912	0.1496	0.1157	0.0885	0.0671
6	0.6860	0.6063	0.5265	0.4497	0.3782	0.3134	0.2562	0.2068	0.1649	0.1301
7	0.8095	0.7440	0.6728	0.5987	0.5246	0.4530	0.3856	0.3239	0.2687	0.2202
8	0.8944	0.8472	0.7916	0.7291	0.6620	0.5925	0.5231	0.4557	0.3918	0.3328
9	0.9462	0.9161	0.8774	0.8305	0.7764	0.7166	0.6530	0.5874	0.5218	0.4579
10	0.9747	0.9574	0.9332	0.9015	0.8622	0.8159	0.7634	0.7060	0.6453	0.5830
11	0.9890	0.9799	0.9661	0.9467	0.9208	0.8881	0.8487	0.8030	0.7520	0.6968
12	0.9955	0.9912	0.9840	0.9730	0.9573	0.9362	0.9091	0.8758	0.8364	0.7916
13	0.9983	0.9964	0.9929	0.9872	0.9784	0.9658	0.9486	0.9261	0.8981	0.8645
14	0.9994	0.9986	0.9970	0.9943	0.9897	0.9827	0.9726	0.9585	0.9400	0.9165
15	0.9998	0.9995	0.9988	0.9976	0.9954	0.9918	0.9862	0.9780	0.9665	0.9513
16	0.9999	0.9998	0.9996	0.9990	0.9980	0.9963	0.9934	0.9889	0.9823	0.9730
17	1.0000	0.9999	0.9998	0.9996	0.9992	0.9984	0.9970	0.9947	0.9911	0.9857
18	1.0000	1.0000	0.9999	0.9999	0.9997	0.9993	0.9987	0.9976	0.9957	0.9928
19	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9995	0.9989	0.9980	0.9965
20	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9991	0.9984
21	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9993
22	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9997
23	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999
24	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

(Continued)

x	α									
	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0003	0.0002	0.0001	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0018	0.0012	0.0008	0.0005	0.0003	0.0002	0.0001	0.0001	0.0001	0.0000
3	0.0071	0.0049	0.0034	0.0023	0.0016	0.0011	0.0007	0.0005	0.0003	0.0002
4	0.0211	0.0151	0.0107	0.0076	0.0053	0.0037	0.0026	0.0018	0.0012	0.0009
5	0.0504	0.0375	0.0277	0.0203	0.0148	0.0107	0.0077	0.0055	0.0039	0.0028
6	0.1016	0.0786	0.0603	0.0458	0.0346	0.0259	0.0193	0.0142	0.0105	0.0076
7	0.1785	0.1432	0.1137	0.0895	0.0698	0.0540	0.0415	0.0316	0.0239	0.0180
8	0.2794	0.2320	0.1906	0.1550	0.1249	0.0998	0.0790	0.0621	0.0484	0.0374
9	0.3971	0.3405	0.2888	0.2424	0.2014	0.1658	0.1353	0.1094	0.0878	0.0699
10	0.5207	0.4599	0.4017	0.3472	0.2971	0.2517	0.2112	0.1757	0.1449	0.1185
11	0.6387	0.5793	0.5198	0.4616	0.4058	0.3532	0.3045	0.2600	0.2201	0.1848
12	0.7420	0.6887	0.6329	0.5760	0.5190	0.4631	0.4093	0.3585	0.3111	0.2676
13	0.8253	0.7813	0.7330	0.6815	0.6278	0.5730	0.5182	0.4644	0.4125	0.3632
14	0.8879	0.8540	0.8153	0.7720	0.7250	0.6751	0.6233	0.5704	0.5176	0.4657
15	0.9317	0.9074	0.8783	0.8444	0.8060	0.7636	0.7178	0.6694	0.6192	0.5681
16	0.9604	0.9441	0.9236	0.8987	0.8693	0.8355	0.7975	0.7559	0.7112	0.6641
17	0.9781	0.9678	0.9542	0.9370	0.9158	0.8905	0.8609	0.8272	0.7897	0.7489
18	0.9885	0.9823	0.9738	0.9626	0.9481	0.9302	0.9084	0.8826	0.8530	0.8195
19	0.9942	0.9907	0.9857	0.9787	0.9694	0.9573	0.9421	0.9235	0.9012	0.8752
20	0.9972	0.9953	0.9925	0.9884	0.9827	0.9750	0.9649	0.9521	0.9362	0.9170
21	0.9987	0.9977	0.9962	0.9939	0.9906	0.9859	0.9796	0.9712	0.9604	0.9469
22	0.9994	0.9990	0.9982	0.9970	0.9951	0.9924	0.9885	0.9833	0.9763	0.9673
23	0.9998	0.9995	0.9992	0.9985	0.9975	0.9960	0.9938	0.9907	0.9863	0.9805
24	0.9999	0.9998	0.9996	0.9993	0.9988	0.9980	0.9968	0.9950	0.9924	0.9888
25	1.0000	0.9999	0.9998	0.9997	0.9994	0.9990	0.9984	0.9974	0.9959	0.9938
26	1.0000	1.0000	0.9999	0.9999	0.9997	0.9995	0.9992	0.9987	0.9979	0.9967
27	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9996	0.9994	0.9989	0.9983
28	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9997	0.9995	0.9991
29	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9996
30	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998
31	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
32	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000