

Mathematik > Wahrscheinlichkeitstabeln > Poissonverteilung

Wahrscheinlichkeitstafel: Poissonverteilung P(1) bis P(2)

Parameter $\lambda = 1, 1.1, 1.2, 1.25, 1.3, 1.4, 1.5, 1.6, 1.7, 1.75, 1.8, 1.9, 2$ als erwartete Ereignishäufigkeit, Zufallsvariable X als bestimmte Anzahl k des Auftretens eines Ereignisses E mit $p(X=k)$, $p(X \leq k)$ (kumuliert), Erwartungswert μ , Standardabweichung σ

P(1)		
k =	p(X=k) =	p(X≤k) =
0	0.36787944	0.36787944
1	0.36787944	0.73575888
2	0.18393972	0.9196986
3	0.06131324	0.98101184
4	0.01532831	0.99634015
5	0.00306566	0.99940582
6	0.00051094	0.99991676
7	0.00007299	0.99998975
8	0.00000912	0.99999887
9	0.00000101	0.99999989
10	1e-7	0.99999999
11	1e-8	1
12	0	1
...

P(1)		
$\mu = 1$		
$\sigma = 1$		

P(1.1)		
k =	p(X=k) =	p(X≤k) =
0	0.33287108	0.33287108
1	0.36615819	0.69902928
2	0.20138701	0.90041628
3	0.0738419	0.97425818
4	0.02030652	0.99456471
5	0.00446744	0.99903214
6	0.00081903	0.99985117
7	0.0001287	0.99997988
8	0.0000177	0.99999757
9	0.00000216	0.99999974
10	2.4e-7	0.99999997
11	2e-8	1
12	0	1
...

P(1.1)
$\mu = 1.1$
$\sigma = 1.049$

P(1.2)		
k =	p(X=k) =	p(X≤k) =
0	0.30119421	0.30119421
1	0.36143305	0.66262727
2	0.21685983	0.8794871
3	0.08674393	0.96623103
4	0.02602318	0.99225421
5	0.00624556	0.99849977
6	0.00124911	0.99974889
7	0.00021413	0.99996302
8	0.00003212	0.99999514
9	0.00000428	0.99999942
10	5.1e-7	0.99999994
11	6e-8	0.99999999
12	1e-8	1
13	0	1
...

P(1.2)	
$\mu = 1.2$	
$\sigma = 1.095$	

P(1.25)		
k =	p(X=k) =	p(X≤k) =
0	0.2865048	0.2865048
1	0.358131	0.64463579
2	0.22383187	0.86846767
3	0.09326328	0.96173095
4	0.02914478	0.99087572
5	0.00728619	0.99816191
6	0.00151796	0.99967987
7	0.00027106	0.99995094
8	0.00004235	0.99999329
9	0.00000588	0.99999917
10	7.4e-7	0.99999991
11	8e-8	0.99999999
12	1e-8	1
13	0	1
...

P(1.25)	
$\mu = 1.25$	
$\sigma = 1.118$	

P(1.3)		
k =	p(X=k) =	p(X≤k) =
0	0.27253179	0.27253179
1	0.35429133	0.62682312
2	0.23028937	0.85711249
3	0.09979206	0.95690455
4	0.03243242	0.98933697
5	0.00843243	0.9977694
6	0.00182703	0.99959642
7	0.0003393	0.99993573
8	0.00005514	0.99999086
9	0.00000796	0.99999883
10	0.00000104	0.99999986
11	1.2e-7	0.99999999
12	1e-8	1
13	0	1
...
P(1.3)		
$\mu = 1.3$		
$\sigma = 1.14$		

P(1.4)		
k =	p(X=k) =	p(X≤k) =
0	0.24659696	0.24659696
1	0.34523575	0.59183271
2	0.24166502	0.83349774
3	0.11277701	0.94627475
4	0.03947195	0.9857467
5	0.01105215	0.99679885
6	0.00257883	0.99937769
7	0.00051577	0.99989345
8	0.00009026	0.99998371
9	0.00001404	0.99999775
10	0.00000197	0.99999972
11	2.5e-7	0.99999997
12	3e-8	1
13	0	1
...
P(1.4)		
$\mu = 1.4$		
$\sigma = 1.183$		

P(1.5)		
k =	p(X=k) =	p(X≤k) =
0	0.22313016	0.22313016
1	0.33469524	0.5578254
2	0.25102143	0.80884683
3	0.12551072	0.93435755
4	0.04706652	0.98142406
5	0.01411996	0.99554402
6	0.00352999	0.99907401
7	0.00075643	0.99983043
8	0.00014183	0.99997226
9	0.00002364	0.9999959
10	0.00000355	0.99999945
11	4.8e-7	0.99999993
12	6e-8	0.99999999
13	1e-8	1
14	0	1
...
P(1.5)		
$\mu = 1.5$		
$\sigma = 1.225$		

P(1.6)		
k =	p(X=k) =	p(X≤k) =
0	0.20189652	0.20189652
1	0.32303443	0.52493095
2	0.25842754	0.78335849
3	0.13782802	0.92118651
4	0.05513121	0.97631772
5	0.01764199	0.99395971
6	0.00470453	0.99866424
7	0.00107532	0.99973956
8	0.00021506	0.99995462
9	0.00003823	0.99999286
10	0.00000612	0.99999898
11	8.9e-7	0.99999986
12	1.2e-7	0.99999998
13	1e-8	1
14	0	1
...
P(1.6)		
$\mu = 1.6$		
$\sigma = 1.265$		

P(1.7)		
k =	p(X=k) =	p(X≤k) =
0	0.18268352	0.18268352
1	0.31056199	0.49324551
2	0.26397769	0.75722321
3	0.14958736	0.90681057
4	0.06357463	0.97038519
5	0.02161537	0.99200057
6	0.00612436	0.99812492
7	0.00148734	0.99961227
8	0.00031606	0.99992833
9	0.0000597	0.99998803
10	0.00001015	0.99999818
11	0.00000157	0.99999974
12	2.2e-7	0.99999997
13	3e-8	1
14	0	1
...
P(1.7)		
$\mu = 1.7$		
$\sigma = 1.304$		

P(1.75)		
k =	p(X=k) =	p(X≤k) =
0	0.17377394	0.17377394
1	0.3041044	0.47787834
2	0.26609135	0.7439697
3	0.15521995	0.89918965
4	0.06790873	0.96709838
5	0.02376806	0.99086644
6	0.00693235	0.99779879
7	0.00173309	0.99953187
8	0.00037911	0.99991099
9	0.00007372	0.9999847
10	0.0000129	0.9999976
11	0.00000205	0.99999965
12	3e-7	0.99999995
13	4e-8	0.99999999
14	1e-8	1
15	0	1
...
P(1.75)		
$\mu = 1.75$		
$\sigma = 1.323$		

P(1.8)		
k =	p(X=k) =	p(X≤k) =
0	0.16529889	0.16529889
1	0.297538	0.46283689
2	0.2677842	0.73062109
3	0.16067052	0.89129161
4	0.07230173	0.96359334
5	0.02602862	0.98962196
6	0.00780859	0.99743055
7	0.00200792	0.99943847
8	0.00045178	0.99989026
9	0.00009036	0.99998061
10	0.00001626	0.99999688
11	0.00000266	0.99999954
12	4e-7	0.99999994
13	6e-8	0.99999999
14	1e-8	1
15	0	1
...
P(1.8)		
$\mu = 1.8$		
$\sigma = 1.342$		

P(1.9)		
k =	p(X=k) =	p(X≤k) =
0	0.14956862	0.14956862
1	0.28418038	0.433749
2	0.26997136	0.70372035
3	0.17098186	0.87470221
4	0.08121638	0.9559186
5	0.03086223	0.98678082
6	0.00977304	0.99655386
7	0.00265268	0.99920654
8	0.00063001	0.99983655
9	0.000133	0.99996956
10	0.00002527	0.99999483
11	0.00000436	0.99999919
12	6.9e-7	0.99999988
13	1e-7	0.99999998
14	1e-8	1
15	0	1
...
P(1.9)		
$\mu = 1.9$		
$\sigma = 1.378$		

P(2)		
k =	p(X=k) =	p(X≤k) =
0	0.13533528	0.13533528
1	0.27067057	0.40600585
2	0.27067057	0.67667642
3	0.18044704	0.85712346
4	0.09022352	0.94734698
5	0.03608941	0.98343639
6	0.0120298	0.99546619
7	0.00343709	0.99890328
8	0.00085927	0.99976255
9	0.00019095	0.9999535
10	0.00003819	0.99999169
11	0.00000694	0.99999864
12	0.00000116	0.99999979
13	1.8e-7	0.99999997
14	3e-8	1
15	0	1
...
P(2)		
$\mu = 2$		
$\sigma = 1.414$		

Michael Buhlmann, www.michael-buhlmann.de 12.2022