



Distribución de Poisson

Probabilidad acumulada $P(X \leq k) \cdot \lambda = 0,5$ a $3 \cdot k = 0$ a 45

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Definición

$X \sim \text{Poisson}(\lambda)$. Cada celda contiene $P(X \leq k)$.
 λ representa el número medio esperado de sucesos en el intervalo considerado.

$$P(X \leq k) = \sum_{i=0}^k e^{-\lambda} \frac{\lambda^i}{i!}$$

k	$\lambda = 0,5$	$\lambda = 1$	$\lambda = 1,5$	$\lambda = 2$	$\lambda = 3$
0	0,6065	0,3679	0,2231	0,1353	0,0498
1	0,9098	0,7358	0,5578	0,4060	0,1991
2	0,9856	0,9197	0,8088	0,6767	0,4232
3	0,9982	0,9810	0,9344	0,8571	0,6472
4	0,9998	0,9963	0,9814	0,9473	0,8153
5	1,0000	0,9994	0,9955	0,9834	0,9161
6	1,0000	0,9999	0,9991	0,9955	0,9665
7	1,0000	1,0000	0,9998	0,9989	0,9881
8	1,0000	1,0000	1,0000	0,9998	0,9962
9	1,0000	1,0000	1,0000	1,0000	0,9989
10	1,0000	1,0000	1,0000	1,0000	0,9997
11	1,0000	1,0000	1,0000	1,0000	0,9999
12	1,0000	1,0000	1,0000	1,0000	1,0000
13	1,0000	1,0000	1,0000	1,0000	1,0000
14	1,0000	1,0000	1,0000	1,0000	1,0000
15	1,0000	1,0000	1,0000	1,0000	1,0000
16	1,0000	1,0000	1,0000	1,0000	1,0000
17	1,0000	1,0000	1,0000	1,0000	1,0000
18	1,0000	1,0000	1,0000	1,0000	1,0000
19	1,0000	1,0000	1,0000	1,0000	1,0000
20	1,0000	1,0000	1,0000	1,0000	1,0000
21	1,0000	1,0000	1,0000	1,0000	1,0000
22	1,0000	1,0000	1,0000	1,0000	1,0000
23	1,0000	1,0000	1,0000	1,0000	1,0000
24	1,0000	1,0000	1,0000	1,0000	1,0000
25	1,0000	1,0000	1,0000	1,0000	1,0000
26	1,0000	1,0000	1,0000	1,0000	1,0000
27	1,0000	1,0000	1,0000	1,0000	1,0000
28	1,0000	1,0000	1,0000	1,0000	1,0000
29	1,0000	1,0000	1,0000	1,0000	1,0000
30	1,0000	1,0000	1,0000	1,0000	1,0000
31	1,0000	1,0000	1,0000	1,0000	1,0000
32	1,0000	1,0000	1,0000	1,0000	1,0000
33	1,0000	1,0000	1,0000	1,0000	1,0000
34	1,0000	1,0000	1,0000	1,0000	1,0000
35	1,0000	1,0000	1,0000	1,0000	1,0000
36	1,0000	1,0000	1,0000	1,0000	1,0000
37	1,0000	1,0000	1,0000	1,0000	1,0000
38	1,0000	1,0000	1,0000	1,0000	1,0000
39	1,0000	1,0000	1,0000	1,0000	1,0000
40	1,0000	1,0000	1,0000	1,0000	1,0000
41	1,0000	1,0000	1,0000	1,0000	1,0000
42	1,0000	1,0000	1,0000	1,0000	1,0000
43	1,0000	1,0000	1,0000	1,0000	1,0000
44	1,0000	1,0000	1,0000	1,0000	1,0000
45	1,0000	1,0000	1,0000	1,0000	1,0000



Distribución de Poisson

Probabilidad acumulada $P(X \leq k) \cdot \lambda = 4 \text{ a } 10 \cdot k = 0 \text{ a } 45$

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Definición

$X \sim \text{Poisson}(\lambda)$. Cada celda contiene $P(X \leq k)$.
 λ representa el número medio esperado de sucesos en el intervalo considerado.

$$P(X \leq k) = \sum_{i=0}^k e^{-\lambda} \frac{\lambda^i}{i!}$$

k	$\lambda = 4$	$\lambda = 5$	$\lambda = 6$	$\lambda = 8$	$\lambda = 10$
0	0,0183	0,0067	0,0025	0,0003	0,0000
1	0,0916	0,0404	0,0174	0,0030	0,0005
2	0,2381	0,1247	0,0620	0,0138	0,0028
3	0,4335	0,2650	0,1512	0,0424	0,0103
4	0,6288	0,4405	0,2851	0,0996	0,0293
5	0,7851	0,6160	0,4457	0,1912	0,0671
6	0,8893	0,7622	0,6063	0,3134	0,1301
7	0,9489	0,8666	0,7440	0,4530	0,2202
8	0,9786	0,9319	0,8472	0,5925	0,3328
9	0,9919	0,9682	0,9161	0,7166	0,4579
10	0,9972	0,9863	0,9574	0,8159	0,5830
11	0,9991	0,9945	0,9799	0,8881	0,6968
12	0,9997	0,9980	0,9912	0,9362	0,7916
13	0,9999	0,9993	0,9964	0,9658	0,8645
14	1,0000	0,9998	0,9986	0,9827	0,9165
15	1,0000	0,9999	0,9995	0,9918	0,9513
16	1,0000	1,0000	0,9998	0,9963	0,9730
17	1,0000	1,0000	0,9999	0,9984	0,9857
18	1,0000	1,0000	1,0000	0,9993	0,9928
19	1,0000	1,0000	1,0000	0,9997	0,9965
20	1,0000	1,0000	1,0000	0,9999	0,9984
21	1,0000	1,0000	1,0000	1,0000	0,9993
22	1,0000	1,0000	1,0000	1,0000	0,9997
23	1,0000	1,0000	1,0000	1,0000	0,9999
24	1,0000	1,0000	1,0000	1,0000	1,0000
25	1,0000	1,0000	1,0000	1,0000	1,0000
26	1,0000	1,0000	1,0000	1,0000	1,0000
27	1,0000	1,0000	1,0000	1,0000	1,0000
28	1,0000	1,0000	1,0000	1,0000	1,0000
29	1,0000	1,0000	1,0000	1,0000	1,0000
30	1,0000	1,0000	1,0000	1,0000	1,0000
31	1,0000	1,0000	1,0000	1,0000	1,0000
32	1,0000	1,0000	1,0000	1,0000	1,0000
33	1,0000	1,0000	1,0000	1,0000	1,0000
34	1,0000	1,0000	1,0000	1,0000	1,0000
35	1,0000	1,0000	1,0000	1,0000	1,0000
36	1,0000	1,0000	1,0000	1,0000	1,0000
37	1,0000	1,0000	1,0000	1,0000	1,0000
38	1,0000	1,0000	1,0000	1,0000	1,0000
39	1,0000	1,0000	1,0000	1,0000	1,0000
40	1,0000	1,0000	1,0000	1,0000	1,0000
41	1,0000	1,0000	1,0000	1,0000	1,0000
42	1,0000	1,0000	1,0000	1,0000	1,0000
43	1,0000	1,0000	1,0000	1,0000	1,0000
44	1,0000	1,0000	1,0000	1,0000	1,0000
45	1,0000	1,0000	1,0000	1,0000	1,0000



Distribución de Poisson

Probabilidad acumulada $P(X \leq k) \cdot \lambda = 12$ a $30 \cdot k = 0$ a 45

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Definición

$X \sim \text{Poisson}(\lambda)$. Cada celda contiene $P(X \leq k)$.
 λ representa el número medio esperado de sucesos en el intervalo considerado.

$$P(X \leq k) = \sum_{i=0}^k e^{-\lambda} \frac{\lambda^i}{i!}$$

k	$\lambda = 12$	$\lambda = 15$	$\lambda = 20$	$\lambda = 25$	$\lambda = 30$
0	0,0000	0,0000	0,0000	0,0000	0,0000
1	0,0001	0,0000	0,0000	0,0000	0,0000
2	0,0005	0,0000	0,0000	0,0000	0,0000
3	0,0023	0,0002	0,0000	0,0000	0,0000
4	0,0076	0,0009	0,0000	0,0000	0,0000
5	0,0203	0,0028	0,0001	0,0000	0,0000
6	0,0458	0,0076	0,0003	0,0000	0,0000
7	0,0895	0,0180	0,0008	0,0000	0,0000
8	0,1550	0,0374	0,0021	0,0001	0,0000
9	0,2424	0,0699	0,0050	0,0002	0,0000
10	0,3472	0,1185	0,0108	0,0006	0,0000
11	0,4616	0,1848	0,0214	0,0014	0,0001
12	0,5760	0,2676	0,0390	0,0031	0,0002
13	0,6815	0,3632	0,0661	0,0065	0,0004
14	0,7720	0,4657	0,1049	0,0124	0,0009
15	0,8444	0,5681	0,1565	0,0223	0,0019
16	0,8987	0,6641	0,2211	0,0377	0,0039
17	0,9370	0,7489	0,2970	0,0605	0,0073
18	0,9626	0,8195	0,3814	0,0920	0,0129
19	0,9787	0,8752	0,4703	0,1336	0,0219
20	0,9884	0,9170	0,5591	0,1855	0,0353
21	0,9939	0,9469	0,6437	0,2473	0,0544
22	0,9970	0,9673	0,7206	0,3175	0,0806
23	0,9985	0,9805	0,7875	0,3939	0,1146
24	0,9993	0,9888	0,8432	0,4734	0,1572
25	0,9997	0,9938	0,8878	0,5529	0,2084
26	0,9999	0,9967	0,9221	0,6294	0,2673
27	0,9999	0,9983	0,9475	0,7002	0,3329
28	1,0000	0,9991	0,9657	0,7634	0,4031
29	1,0000	0,9996	0,9782	0,8179	0,4757
30	1,0000	0,9998	0,9865	0,8633	0,5484
31	1,0000	0,9999	0,9919	0,8999	0,6186
32	1,0000	1,0000	0,9953	0,9285	0,6845
33	1,0000	1,0000	0,9973	0,9502	0,7444
34	1,0000	1,0000	0,9985	0,9662	0,7973
35	1,0000	1,0000	0,9992	0,9775	0,8426
36	1,0000	1,0000	0,9996	0,9854	0,8804
37	1,0000	1,0000	0,9998	0,9908	0,9110
38	1,0000	1,0000	0,9999	0,9943	0,9352
39	1,0000	1,0000	0,9999	0,9966	0,9537
40	1,0000	1,0000	1,0000	0,9980	0,9677
41	1,0000	1,0000	1,0000	0,9988	0,9779
42	1,0000	1,0000	1,0000	0,9993	0,9852
43	1,0000	1,0000	1,0000	0,9996	0,9903
44	1,0000	1,0000	1,0000	0,9998	0,9937
45	1,0000	1,0000	1,0000	0,9999	0,9960