


4.15 Poisson distribution

4.15.1 Compute $P(X = a)$

Consider $X \sim \text{Po}(5)$. Suppose you want to know $P(X = 6)$.


Press , select Probability > Distributions > Poisson Pdf and fill the parameters as follows:

Poisson Pdf

λ :


X Value:

OK Cancel

Press . The result should be 0.146 (rounded).

4.15.2 Compute $P(X \leq a)$

Consider $X \sim \text{Po}(5)$. Suppose you want to know $P(X \leq 6)$.

Press , select Probability > Distributions > Poisson Cdf and fill the parameters as follows:


Poisson Cdf

λ :

Lower Bound:


Upper Bound:

OK Cancel

Press . The result should be 0.762 (rounded).

4.15.3 Graph a Poisson distribution

Consider $X \sim \text{Po}(5)$. Suppose you want to graph it.

- ① Create a new document and select Add Graphs.
- ② Press  and select Graph Entry/Edit > Sequence > Sequence. Enter the parameters as follows:

$$\begin{cases} \mathbf{u1}(n)=\text{poissPdf}(5,n) \\ \text{Initial Terms:=} \\ 1 \leq n \leq 99 \text{ nstep}=1 \end{cases}$$

③ Choose a proper window :

Window Settings

XMin:

XMax:

XScale:

YMin:

YMax:

YScale:

④ Press . The following should be displayed:

