

## 4.15 Poisson distribution

## **4.15.1** Compute P(X = a)

Consider  $X \sim Po(5)$ . Say you want to know P(X = 6).

Press 2nd , **PoissonPdf(** and fill the parameters as follows:



Pres **Paste** and enter . The result should be 0.146 (rounded).

## **4.15.2** Compute $P(X \le a)$

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

Press 2nd, Vars, **Poissoncdf(** and fill the parameters as follows:

<mark>Poissoncdf</mark> λ:5 x value:6 Paste

Pres **Paste** and enter . The result should be 0.762 (rounded).

## 4.15.3 Graph a Poisson distribution

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

① Since a Poisson distribution can only have integers values, put your calculator in sequence mode (press and highlight seq, 4<sup>th</sup> line).



2 Press y=1, and fill the parameters as follows:

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see 4.15.1 to enter **PoissonPdf(**,

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3 Choose a proper window :

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Press window to access this screen

Press graph
The following should display:

