

## Erlang distribution

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$$f(x) = \frac{\lambda e^{-\lambda x} (\lambda x)^{k-1}}{(k-1)!},$$
$$F(x) = 1 - e^{-\lambda x} \sum_{j=0}^{k-1} \frac{(\lambda x)^j}{j!},$$
$$EX = \frac{k}{\lambda}, \text{Var}X = \frac{k}{\lambda^2}$$

Random value with Erlang distribution results as sum of k exponential distributed random values

### Symbol list:

$\lambda, k$  parameters  
 $x$  variable