

How to find the likelihood functions?

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Hi, I am writing a winBUGS code and I need to specify the likelihood for the gamma distribution and I am specifying it as the pdf:
 $(\text{pow}(b,a)/(\text{exp}(\text{loggam}(a)))*(\text{exp}(-b*\text{lambda}[i]))*\text{pow}(\text{lambda}[i],(a-1)))$

But it is not accepting it although I know that I could use the pdf in R to estimate the parameters by MLE. There must be a shorter form that is the real likelihood function, (I know that for the normal distribution the likelihood is much shorter than the pdf and it is accepted by winBUGS).

Is there like a webpage where the likelihood functions are displayed?

PS: I know that BUGS has a dgamma function and that I do not need to specify the likelihood function, but it is for some other purpose I am doing that so that I can afterwards generate a new distribution which is a mixture of two gamma distributions.

Thanks.

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