I'm trying to add fitted line to scatter plot (x,y).

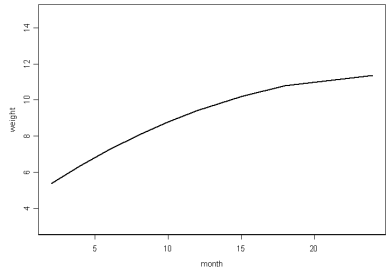
Here "weight" is dependent variable and "month" is time variable. The program is:

Lme1<-Lme(weight~month+(month^2),data=DataSetName,random=~month|id)

When I use code below:

Lines(month[order(month)],fitted.lme(lme1,level=0)[order(month)])

It draws a smooth line as you see below:



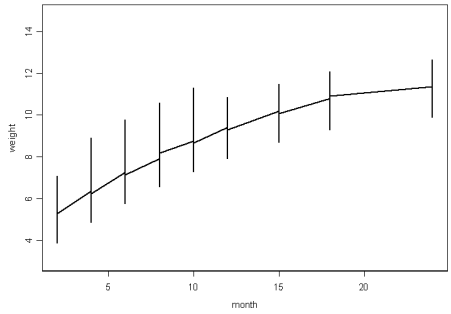
But when I add a covariate (like birth weight) to my model as below:

Lme2<-lme(weight~BirthWeight+month+(month^2),data=DataSetName,random=~month|id)

And then write the code below:

Lines(month[order(month)],fitted.lme(lme2,level=0)[order(month)])

It doesn't draw smooth line. As you see below the line is not smooth.



How can I fix this problem?

What is the role of term "level" in this code? And what its options are?

Thanks a lot