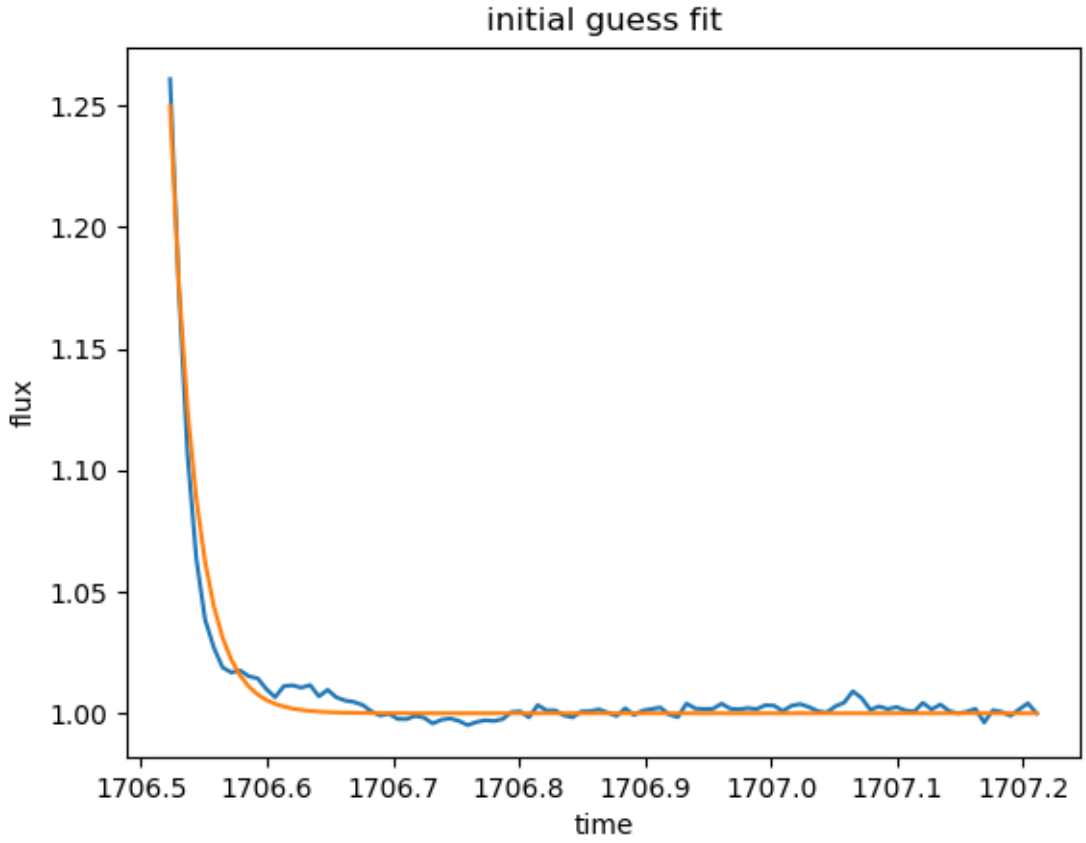
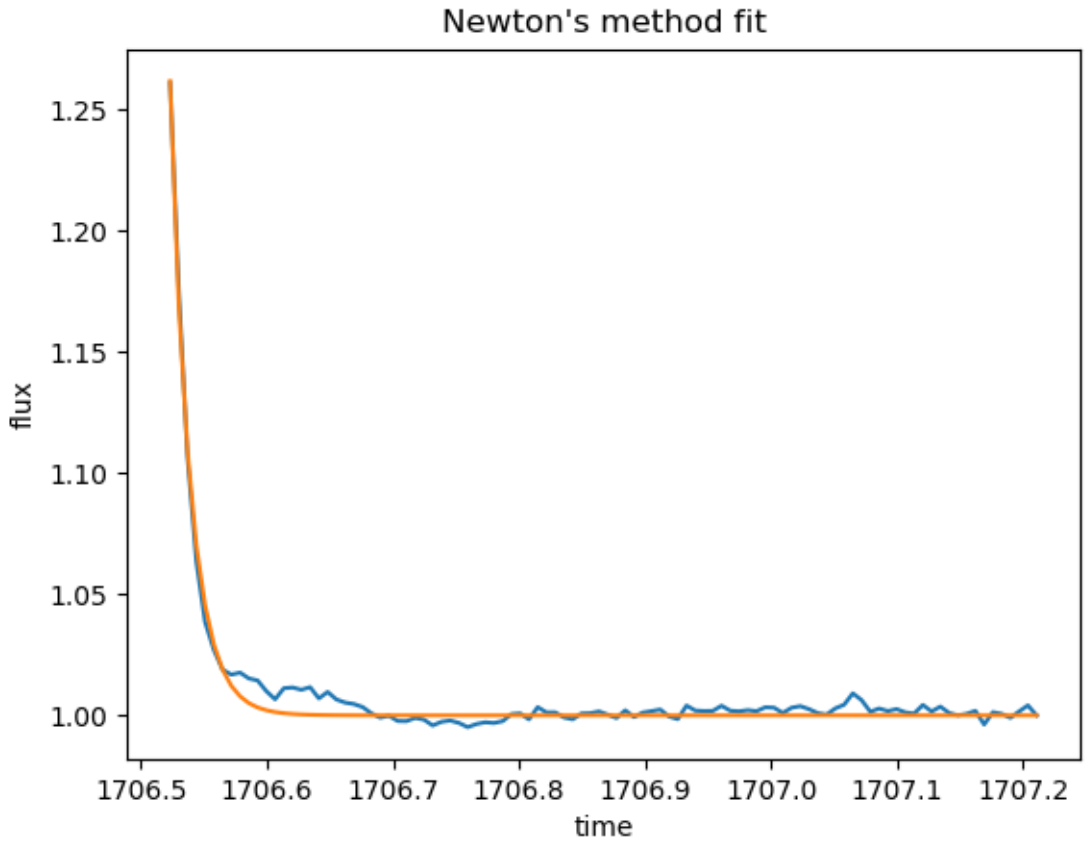
Prob. 2
a)



b)
best fit parameters: $N_0 = 0.26180992$, $\lambda = 63.14972642$



c) error in fit as measured by sum of square of residuals is ~0.0018
I seem to remember knowing how to calculate error in fit parameters a few years ago, but it doesn't seem like I remember it today, and I don't have time to relearn it. As such, this vague estimate of error that is not parameter specific is a poor way of modelling the error, and I don't think it's a particularly reasonable method to use.

d) I do not trust the errors I came up with in part c) because I barely came up with them. However, I'm not sure how looking at the full span of the data would change my opinion on this. The fit of the flare looks pretty reasonable to me, and I don't see how the rest of the data that mostly just hovers around 1 would impact how well I think this was fit, or how big the errors in the fit should be.