

**Homework 2. Due Wednesday September 8.**

1. Continue the first question of Homework 1. For the probit model that you estimated. calculate the standard errors of the estimated parameters in three different ways and compare: Using the Hessian (calculated analytically), using the Hessian calculated numerically, using the Outer Product of the gradients. Are they similar? Compare for a small sample and for a longer sample.
2. Find the Score and Hessian for an exponential distribution and verify the information matrix equality. (Feel free to look up the variance for the exponential.)