Econ4130 17H

Exercises for no-seminar week 36

(solutions on the net at the end of the week – i.e., Thursday 7 Sept.)

Rice chapter 2: (on the Weibull distribution)

No. 33

No. 67 + extra for c.: Suppose you have drawn two (by calculator e.g.) observations, 0.08 and 0.63, from the uniform[0, 1] distribution. Transform these numbers to two observations drawn from a Weibull distribution with $\alpha = 0.8$ and $\beta = 3$ (using the parametrization suggested in ex. 67).

[**Note** that exercises 33 and 67 both deal with the same class of so-called Weibull distributions, but Rice has chosen a different parametrization in the two exercises. The β is the same in both cases, but the α's are different. If we call the alpha in ex. 33 as *A*, then $A = \frac{1}{\alpha^{\beta}}$ expressed by the alpha of ex. 67. Note that $A > 0 \Leftrightarrow \alpha > 0$, and that the two parametrizations determine the same class of distributions. The *Weibull distribution with two parameters,* (α, β), as specified in exercise 67, is a popular candidate for modeling the distribution of the time spent in a certain state (e.g., being unemployed).]