Toy Example

An easy way to generate a sample from $Z \sim \text{TExp}(\theta, (0, c))$, is:

1. First, sample $U \sim \text{Uniform}(0, F(c|\theta))$ where

$$F(x|\theta) = 1 - e^{-\theta x}$$

   is the $\text{Exp}(\theta)$ c.d.f.

2. Set $Z = F^{-1}(U|\theta)$ where

$$F^{-1}(u|\theta) = -(1/\theta) \log(1 - u)$$

   is the inverse c.d.f. for $u \in (0, 1)$.

There is an exercise on the next slide to prove step 2.