

SIMULATION OF CONTINUOUS RANDOM VARIABLES

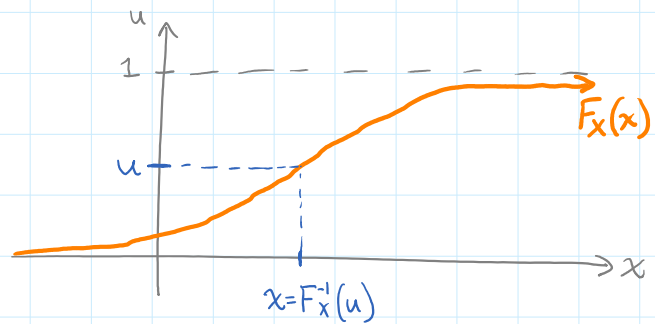
Inverse cdf method:

To simulate values of X with pdf $f_X(x)$
and cdf $F_X(x)$:

Find inverse function F_X^{-1} .

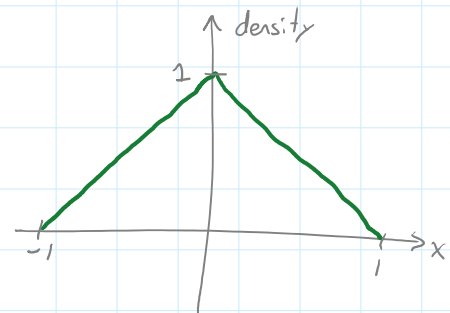
Generate $u \sim \text{Uniform}[0, 1]$

Then compute $x = F_X^{-1}(u)$



Problem 1: simulate values of X

$$\text{with } f_X(x) = \begin{cases} x+1 & \text{if } -1 \leq x \leq 0 \\ 1-x & \text{if } 0 < x \leq 1 \\ 0 & \text{otherwise} \end{cases}$$



cdf F :

