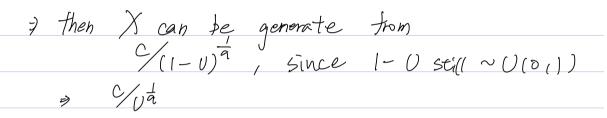
Given a random variable U that is uniform on (0,1), how can you simulate from a continuous distribution with cdf  $F(x)=1-\left(rac{c}{x}
ight)^a, x\geq c$  for some a,c>0? Show details.

$$7(x) = 1 - \left(\frac{C}{x}\right)^{4}$$

$$\Rightarrow x = 1 - \left[\frac{C}{x^{-1}(x)}\right]^{4}$$

$$\frac{C}{x^{-1}(x)} = (1 - x)^{\frac{1}{4}}$$

$$\frac{C}{x^{-1}(x)} = \frac{C}{(1 - x)^{\frac{1}{4}}}$$



> Conclusion we can generate  $X \sim 7(x)$  by  $C/\sqrt{4}$ , which  $U \sim U(011)$ , for  $U \neq 0$ .