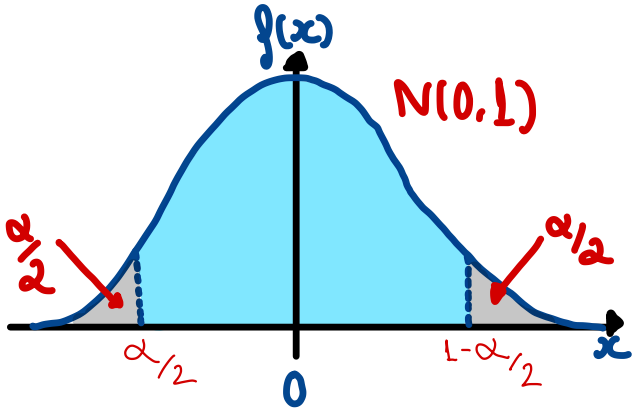
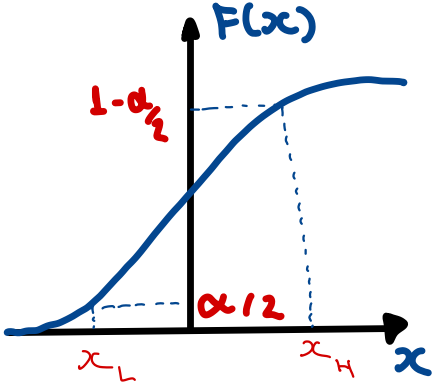


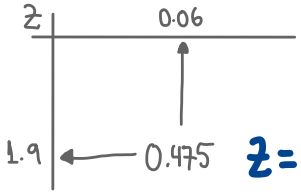


$$P(x_L \leq Z \leq x_H) = 0.95$$

$$\begin{cases} P(Z \leq x) = \alpha/2 \\ P(Z \leq x) = 1-\alpha/2 \end{cases}$$

$$\begin{cases} F_X(x_L) = \alpha/2 \rightarrow x_L = F_X^{-1}(\alpha/2) \\ F_X(x_H) = 1-\alpha/2 \rightarrow x_H = F_X^{-1}(1-\alpha/2) \end{cases}$$

CDF for standard normal distribution is given



$z = 1.96$

$$F_x^{-1}(0.025) = x_L \rightarrow \boxed{x_L = -1.96}$$

$$F_x^{-1}(0.975) = x_H \rightarrow \boxed{x_H = 1.96}$$