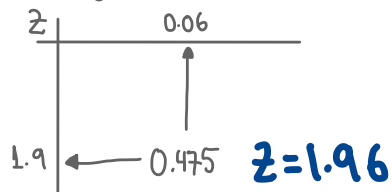


$$P(x_L \leq z \leq x_H) = 0.95$$

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

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

CDF for standard normal distribution is given



$$\dot{F}_x^{-1}(0.025) = x_L \rightarrow$$

$$x_L = -1.96$$

$$\dot{F}_x^{-1}(0.975) = x_H \rightarrow$$

$$x_H = 1.96$$