

The random variable  $Z$  is normally distributed such that  $\mu = 0$  and  $\sigma = 1$ .

$$Z \sim \mathcal{N}(0, 1)$$

We have introduced the cumulative function,  $\Phi(z)$ .

$$\Phi(z) = P(Z < z) = \text{Left area under density function up to } z$$