The Standard Normal Probability Distribution

The standard normal probability distribution has the same general symmetric shape as other normal distributions with the following properties:

Mean $\mu = 0$ Variance $\sigma = 1$

Therefore, the density (of the random variable z) is:

$$f(z) = \frac{1}{\sqrt{2\pi}} \exp\left\{-\frac{1}{2}(z)^2\right\}$$