Distribution:

Normal

Mean μ:

0

- (●) Variance σ^2
- ( ) Standard deviation σ

Variance σ^2:

1

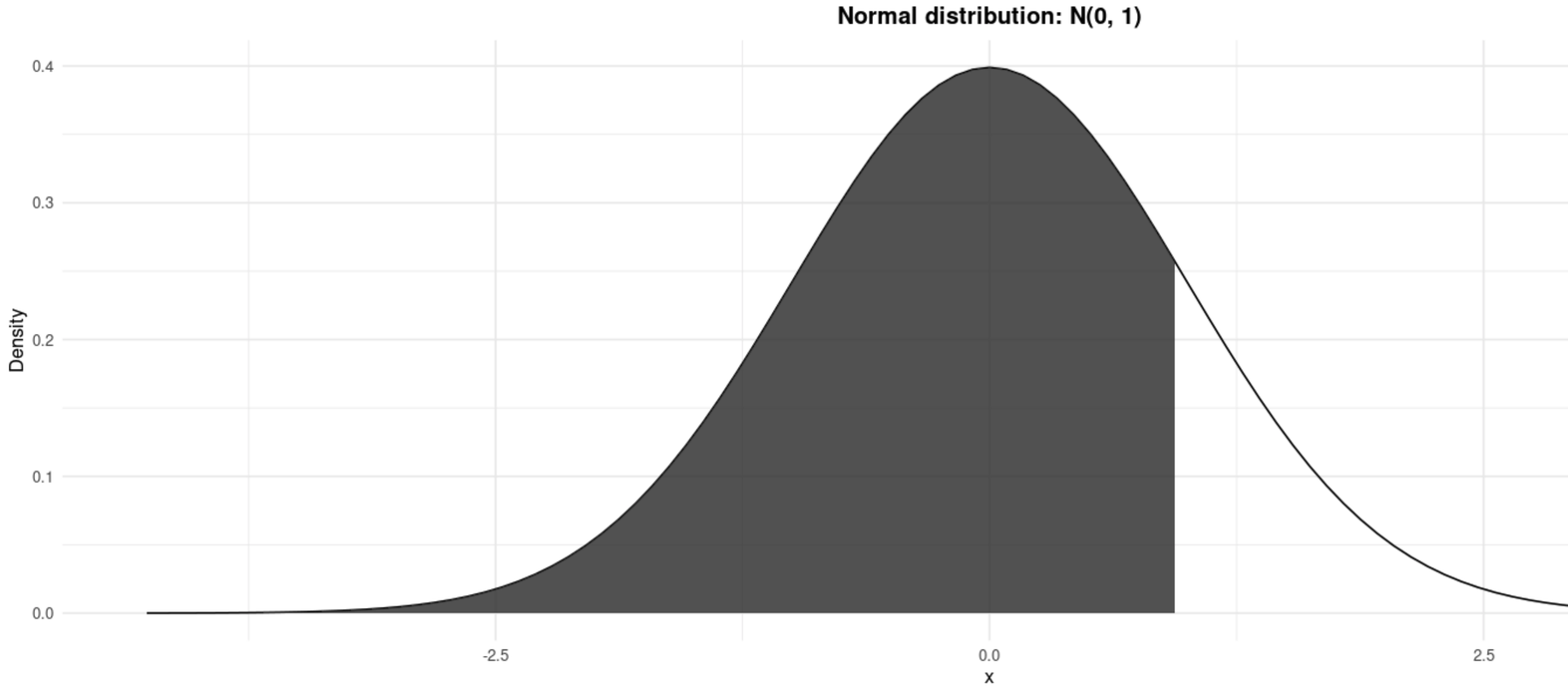
- (●) Lower tail : $P(X \leq x)$
- ( ) Upper tail : $P(X > x)$
- ( ) Interval : $P(a \leq X \leq b)$

x:

1

Solution:

$X \sim \mathcal{N}(\mu = 0, \sigma^2 = 1)$ and $P(X \leq 1) = P(Z \leq (1-0)/1) = P(Z \leq 1) = 0.8413$



Details:

Probability density function:

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{1}{2\sigma^2}(x-\mu)^2}$$

where $-\infty < x < \infty, -\infty < \mu < \infty, \sigma > 0$

$\mu = E(X) = 0$