

# Gaussian Distribution

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## 1 Univariate Gaussian Distribution

$$\phi'(x) = -x\phi(x) \tag{1}$$

$$\int \Phi(x)dx = x\Phi(x) + \phi(x) \tag{2}$$

## 2 Multivariate Gaussian Distribution

$$\phi'(x) = -x\phi(x) \tag{3}$$

$$\int \Phi(x)dx = x\Phi(x) + \phi(x) \tag{4}$$