$c = S\Phi(x_1) - e^{r\tau}X\Phi(x_2)$

$x_1 = \frac{ln(S/X)+(r+\frac{1}{2}\sigma^2)\tau}{\sigma\sqrt{\tau}}$, $x_2 = x_1 - \sigma\sqrt{\tau}$

where c is the options price,

S is the stock price value, which fluctutates according to a geometric Brownian motion

$\Phi()$ is the cumulative normal distribution function,

$e^{r\tau}$ represents the discounting over period τ at rate r ,

X is the "exercise price."