

Black-Scholes Menu

This menu implements the widely used Black-Scholes European option valuation model. To show it, touch the “**OPT**” key and in the “**4) Finance:**” section touch the “**Black-Scholes**” button.

Black-Scholes Option Valuation

STOCK +50.00	STRIKE +60.00	DAYS 180
DIV% +0.00%	VOL% +25.00%	R.F.:% +7.00%

CALL **PUT**

[STOCK]	Stores the Stock prices of the asset.
[STRIKE]	Stores the Strike prices of the asset.
[#DAYS]	Stores the number of days between the Stock and Strike dates.
[DIV%]	Stores the annual dividend yield of the asset.
[VOL%]	Stores the market price volatility of the asset.
[R.F.:%]	Stores the market annual risk free rate in percentage.
[CALL]	Calculates the CALL option prices for the asset.
[PUT]	Calculates the PUT option prices for the asset.

To perform the CALL & PUT calculation, the values of “STOCK”, “STRIKE”, “DIV%”, “VOL%”, “R.F.%” and “DAYS” must be entered typing the value and touching in the corresponding button.

Example:

Consider the European call and put options on a stock that has a current spot price of \$50 and a volatility of 25%. The option has a strike price of \$60 and matures in 180 days. The risk-free interest rate is 7%.

What are the values of the PUT and CALL options?

Solution:

Keystroke	Description
Type "50" [STOCK]	Input the current market value of the underlying asset.
Type "60" [STRIKE]	Input the strike price on the option.
Type "25" [VOL%]	Input the stock annualized volatility.
Type "0" [DIV%]	Input the current annualized dividend yield of the asset.
Type "7" [R.F.%]	Input the risk free rate that corresponds to the option lifetime.
Type "180" [DAYS]	Input the number of days to expiration of the option.
[CALL]	Calculates the call option price. Result = 1.05
[PUT]	Calculates the put option price. Result = 9.02