

Parabola Option

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$$C_T = \max[a(S_T^2 - K^2) + b(S_T - K), 0]$$

$$P_T = \max[a((2K - S_T)^2 - K^2) + b((2K - S_T) - K), 0]$$

The parabola option has a payoff which is a parabola of the underlying asset at expiration. The parabola option is a special case of the general power option.

Symbol list:

C_T	Value of the vanilla call option at expiration
P_T	Value of the vanilla put option at expiration
S_T	Value of the underlying asset at expiration
S_T^2	Square value of the underlying asset at expiration
K	Strike (exercise) price
a, b	Weights of the power terms
T	Expiration date