

This is for euro

```
Debug — bash — 137x36
Trinomial Price of an European Put Option = 0.862011
Put Price according to Black-Scholes = 0.862071
-----
Verifying Put-Call Parity:  $S+P-C = K\exp(-rT)$ 
 $60 + 0.862011 - 12.8225 = 50\exp(-0.08 * 0.5)$ 
 $48.0395 = 48.0395$ 
-----
wirelessprvnat-172-17-191-135:Debug shengdongliu$ time ./end-term\ ie523 0.5 5000 0.08 0.3 60 50
Recursive Binomial European Option Pricing
Expiration Time (Years) = 0.5
Number of Divisions = 5000
Risk Free Interest Rate = 0.08
Volatility (%age of stock value) = 30
Initial Stock Price = 60
Strike Price = 50
-----
Up Factor = 1.00425
Uptick Probability = 0.250413
Downtick Probability = 0.249588
notick Probability = 0.5
-----
Trinomial Price of an European Call Option = 12.8225
Call Price according to Black-Scholes = 12.8226
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Trinomial Price of an European Put Option = 0.862011
Put Price according to Black-Scholes = 0.862071
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Verifying Put-Call Parity:  $S+P-C = K\exp(-rT)$ 
 $60 + 0.862011 - 12.8225 = 50\exp(-0.08 * 0.5)$ 
 $48.0395 = 48.0395$ 
-----
real    0m1.994s
user    0m1.812s
sys      0m0.176s
wirelessprvnat-172-17-191-135:Debug shengdongliu$
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this is for ameri

```
wirelessprvnat-172-17-191-135:Debug shengdongliu$ time ./endterm_for_a_mem 0.5 5000 0.08 0.3 60 50
Recursive Binomial European Option Pricing
Expiration Time (Years) = 0.5
Number of Divisions = 5000
Risk Free Interest Rate = 0.08
Volatility (%age of stock value) = 30
Initial Stock Price = 60
Strike Price = 50
-----
Up Factor = 1.00425
Uptick Probability = 0.250413
Downtick Probability = 0.249588
notick Probability = 0.5
-----
Trinomial Price of an European Call Option = 12.8225
Trinomial Price of an European Put Option = 0.896696
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Verifying Put-Call Parity:  $S+P-C = K\exp(-rT)$ 
 $60 + 0.896696 - 12.8225 = 50\exp(-0.08 * 0.5)$ 
 $48.0742 \neq 48.0395$ 
Looks like Put-Call Parity Does Not Hold
-----
real    0m2.477s
user    0m2.288s
sys      0m0.187s
wirelessprvnat-172-17-191-135:Debug shengdongliu$
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