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In[1]:= (* These are functions the call for a program to be loaded (Needs)
        the program being loaded is the standard normal density function (ndist)
        and the cumulative distribution function CDF *)

Needs["Statistics`NormalDistribution`"]

In[4]:= ndist = NormalDistribution[0, 1]
        CDF[ndist, .25]

Out[4]= NormalDistribution[0, 1]

Out[5]= 0.598706

In[21]:= (* Check this value with the cumulative normal distribution function
        on the class webpage *)

(* Loading parameters for the strangle, the exercise prices were
    selected to conform to the values used in RSD chapter 9 *)

r = .06
T = .4
S = 48
X = 50
v = .3
(* Calculating the d's, and prices and position value *)
x = ((Log[S/X] + ((r + (.5 * (v^2))) * T))) / (v * Sqrt[T])
y = x - (v * Sqrt[T])

Q = (S * CDF[ndist, x]) - ((X * Exp[-r * T]) * CDF[ndist, y])

P = (S * (CDF[ndist, x] - 1)) - ((X * Exp[-r * T]) * (CDF[ndist, y] - 1))
V = P + Q
(* Calculating the Greeks *)
M = (2 * CDF[ndist, x]) - 1
G = 2 * (1 / (S * v * Sqrt[T])) * PDF[ndist, x]
W = (((S * v) / (2 * Sqrt[T])) * PDF[ndist, x]) + (((X * Exp[-r * T]) * r) * CDF[ndist, y])
WW = 2 W - ((X * Exp[-r * T]) * r)
Z = S - (X * (Exp[-r * T]))

Out[21]= 0.06

Out[22]= 0.4

Out[23]= 48

Out[24]= 50

Out[25]= 0.3

Out[26]= 0.00620863

Out[27]= -0.183528

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Out[28]= 3.26582
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Out[29]= 4.08011
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Out[30]= 7.34593
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Out[31]= 0.00495374
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Out[32]= 0.0876071
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Out[33]= 5.79273
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Out[34]= 8.65661
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Out[35]= -0.814285
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0.496888
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