

In[]:=

In[]:=

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

Out[]:= NormalDistribution[0, 1]

Out[]:= 0.598706

In[]:= r = .05

T = .25

S = 36

X = 40

x = ((Log[S / X] + ((r + (.5 * (v^2))) * T)))) / (v * Sqrt[T])

y = x - (v * Sqrt[T])

f[v_] := (S * CDF[ndist, x]) - ((X * Exp[-.0125]) * CDF[ndist, y])

g[v_] := (S * (CDF[ndist, x] - 1)) - ((X * Exp[-.0125]) * (CDF[ndist, y] - 1))

FindRoot[f[v] == 2.2584, {v, .4}]

Out[]:= 0.05

Out[]:= 0.25

Out[]:= 36

Out[]:= 40

Out[]:=
$$\frac{2. \left(0.25 \left(0.05 + 0.5 v^2 \right) - \text{Log} \left[\frac{10}{9} \right] \right)}{v}$$

Out[]:=
$$-0.5 v + \frac{2. \left(0.25 \left(0.05 + 0.5 v^2 \right) - \text{Log} \left[\frac{10}{9} \right] \right)}{v}$$

Out[]:= {v → 0.5}