

CE311k Lab 8 Solution

```
Public Class Form1

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        Dim xn As Single, err As Single, xo As Single
        Dim i As Integer

        xo = 1
        i = 0

        Do
            xn = g(xo)
            err = Math.Abs((xn - xo) / xn)
            xo = xn

        Loop Until (err < 0.000001)

        ListBox1.Items.Add("infiltration after one hour is " &
FormatNumber(xn, 2))

    End Sub

    Private Function g(ByVal x As Single) As Single

        Const K = 0.65
        Const t = 1
        Const y = 16.7
        Const theta = 0.34

        g = K * t + y * theta * Math.Log(1 + (x / (y * theta)))

    End Function
End Class
```

