

In-Class Exercise: Newton Method

The function $y = (x + \exp(x))\cos(x)$ has three roots on the interval $[-2,2]$. Two of the roots are $x = \pm \frac{\pi}{2}$. Do two iterations of the Newton Method “by hand” (you can use Matlab to do the calculations) to find the third root. Use as a starting point $x_0 = 0$. Turn in all of the commands that you used along with the corresponding output.
Hint: You might want to plot the function and visually find the third root.