ECE 111 - Homework #13

Assume the VI characteristics for 1N4004 diodes are:

$$V_d = 0.038 \cdot \ln\left(\frac{I_d}{7.7 \cdot 10^{-11}} + 1\right) \qquad I_d = 7.7 \cdot 10^{-11}\left(\exp\left(\frac{V_d}{0.038}\right) - 1\right)$$

1) Write the voltage node equations for the following circuit.

2) Solve using fminsearch and MATLAB

3) Check your results using CircuitLab
   - Use 1N4004 diodes