Homework Assignment #16

(due Sep 25, 2020, 11pm, via gradescope)

1. Griffiths 3.8

2. Griffiths 3.10
   You will need the solution to problem 2.52a:
   Problem 2.52: Two infinitely long wires running parallel to the x-axis carry uniform charge densities $+\lambda$ and $-\lambda$. The wire with $+\lambda$ is at $y = a, z = 0$ and the wire with $-\lambda$ is at $y = -a, z = 0$.
   The solution to problem 2.52a, the potential of the two line charges is

$$V = \frac{\lambda}{4\pi\epsilon_0} \ln\left(\frac{(y+a)^2 + z^2}{(y-a)^2 + z^2}\right)$$