Capacity of a coaxial wire

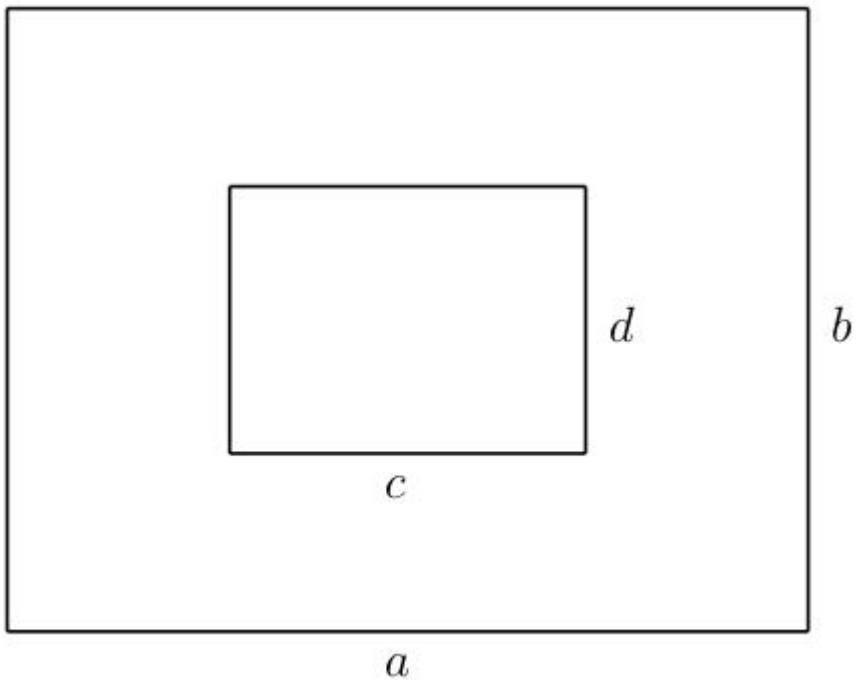

Figure 1 - Geometry of the problem

Solving the Laplace Equation given that V=0 in the external wire and V=1 in the internal wire. I used the Gauss-Seidel method.

$$Q = \epsilon_0 \oint \vec{E} \cdot \vec{dl} = -\epsilon_0 \oint \frac{\partial V}{\partial n} \, dl$$

Equation 1 - How to calculate the capacity

Try to extrapolate the value of the capacity to the limit of zero spacing.