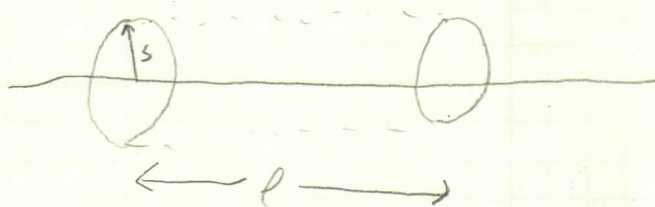


2.13

&amp;

2.14

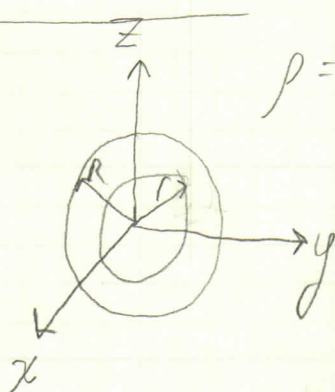


$$Q_{enc} = \lambda l$$

$$\int \vec{E} \cdot d\vec{a} = \frac{\lambda l}{\epsilon_0} = |\vec{E}| A = |\vec{E}| 2\pi s l$$

$$\vec{E} = \frac{\lambda l}{\epsilon_0 2\pi s l} \hat{s} = \frac{\lambda}{2\pi \epsilon_0 s} \hat{s}$$

2.14



$$\rho = kr$$

$$k = \left[ \frac{C}{m^4} \right]$$

$$Q_{enc} = 4\pi \int_0^r kr' \cdot r'^2 dr' = k\pi r^4$$

$$|\vec{E}| A = \frac{Q_{enc}}{\epsilon_0} = |\vec{E}| 4\pi r^2 \Rightarrow \vec{E} = \frac{kr^2}{4\epsilon_0} \hat{r}$$