for $r \leq R$ $\quad B(2\pi r) = \mu_0 \varepsilon_0 \frac{dE}{dt} (\pi r^2)$

$$B = \frac{\mu_0 \varepsilon_0}{2} r \frac{dE}{dt}.$$

For $r \geq R$ $\quad B(2\pi r) = \mu_0 \varepsilon_0 \frac{dE}{dt} (\pi R^2)$

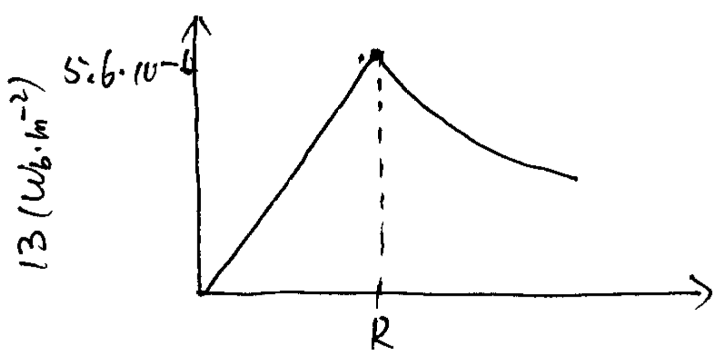
$$B = \frac{\mu_0 \varepsilon_0}{2} \frac{R^2}{r} \frac{dE}{dt}.$$

The magnitutude of the field at $r=R$ is

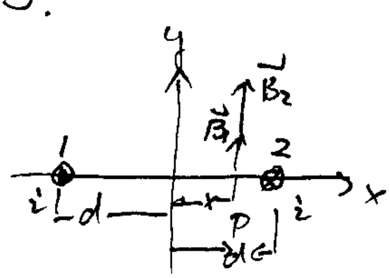
$$B = \frac{\mu_0 \varepsilon_0}{2} R \frac{dE}{dt}$$

$$= \frac{1}{2} \cdot 4\pi \cdot 10^{-7} \cdot 8.9 \cdot 10^{-12} \cdot 0.1 \cdot 10^{13}$$

$$= 5.6 \cdot 10^{-6}\ Wb \cdot m^{-2}.$$



3.



let's consider an arbitrary point P on the x axis, as shown in the figure. the Point is at distance $d+x$ from wire ① at the left, and distance $d-x$ from wire ② at the right.