

$$\vec{E} = (x, 0, 2z)$$

$$\vec{B} = (0, 0, 0)$$

$$\nabla \cdot \vec{B} = 0$$

$$\nabla \cdot \vec{E} = 3$$

$$\therefore \rho = 3\epsilon_0$$

$$\frac{\rho}{\epsilon_0} \leftarrow \text{const}$$

$$\nabla \times \vec{E} = 0$$

" / "

$\rho =$ do this

$$\nabla \times \vec{B} = 0$$

$$\therefore \mu_0 \vec{J} + \epsilon_0 \mu_0 \frac{\partial \vec{E}}{\partial t} = 0$$

$$\frac{\partial \vec{E}}{\partial t} \neq 0$$

$$\cancel{\mu_0} \vec{J} = -\epsilon_0 \cancel{\mu_0} \frac{\partial \vec{E}}{\partial t}$$

$$\vec{J} = -\epsilon_0 \frac{\partial \vec{E}}{\partial t}$$

$$\vec{J} \neq 0$$

