# *Plane Waves from Last Time*
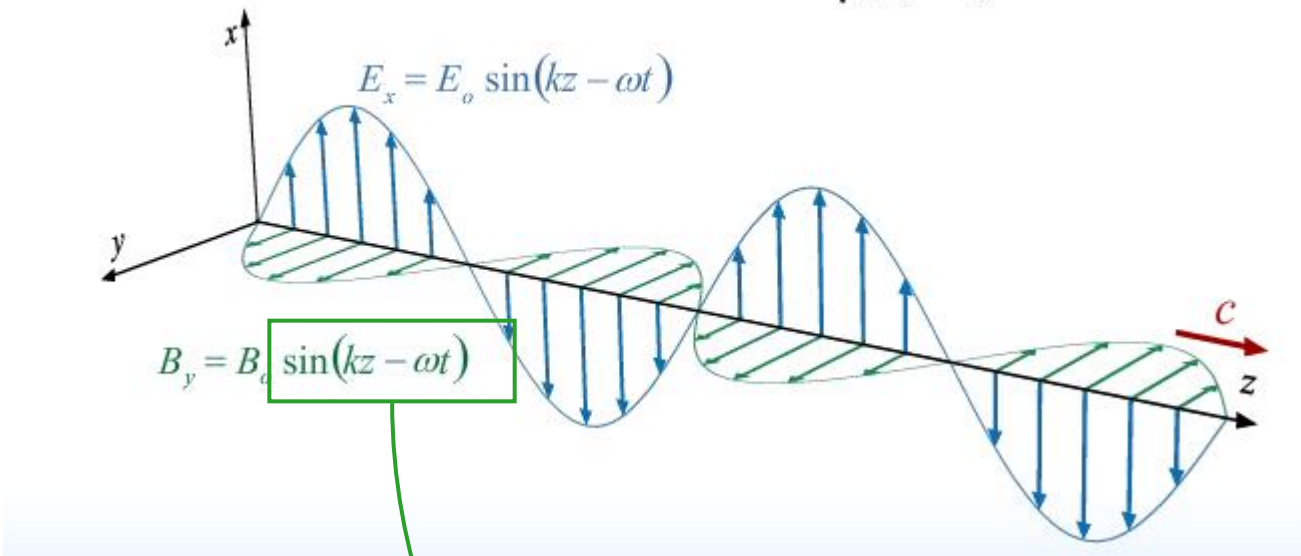
Velocity $c = \dfrac{\omega}{k} = \dfrac{1}{\sqrt{\mu_o \varepsilon_o}} = \dfrac{E_o}{B_o} = 3 \times 10^8 \text{ m/s}$

$E_x = E_o \sin(kz - \omega t)$

$B_y = B_o \sin(kz - \omega t)$

$E$ and $B$ are perpendicular and in phase

Oscillate in time and space

Direction of propagation given by $E$ X $B$

$E_0 = cB_0$

Argument of sin/cos gives direction of propagation