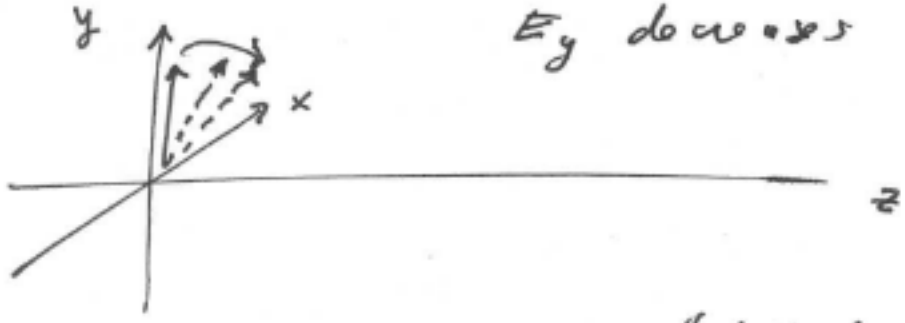
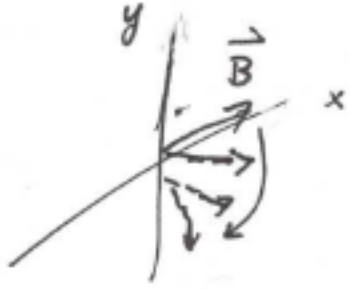
at $t=0$: $\vec{E} = E_0 \cos\omega t\, \hat{j}$. As $t > 0$



E_y decreases and E_x increases

the electric field rotates "left-handed" wrt + z-axis but "right-handed" wrt direction of propagation.

At $t=0$ $\vec{B} = \frac{E_0}{c} \cos\omega t\, \hat{i}$, as $t > 0$



B_x decreases, $B_y < 0$

Similarly rotates wrt direction of propagation right-handedly.