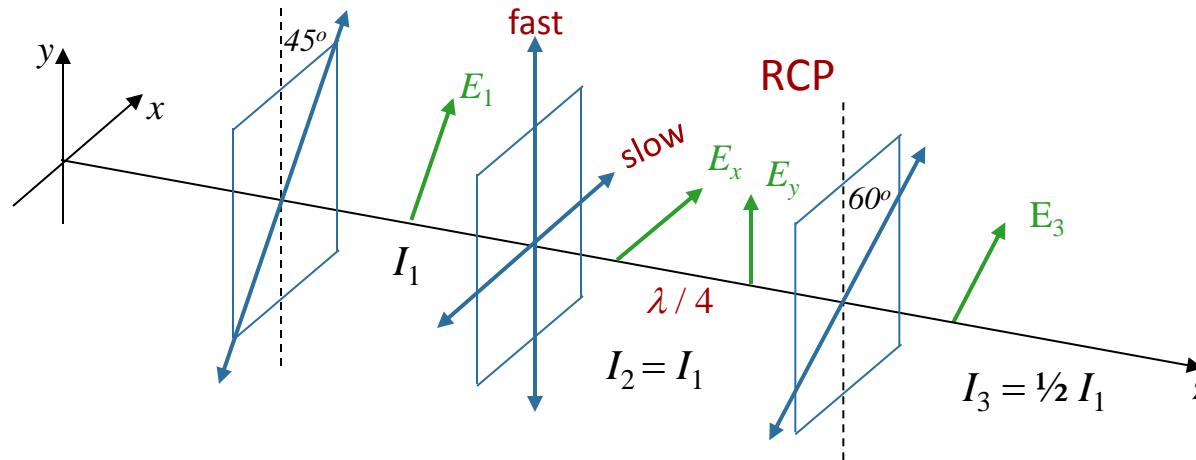


Calculation



Light is incident on two linear polarizers and a quarter wave plate (QWP) as shown.



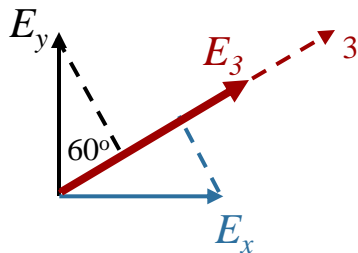
What is the intensity I_3 of the light after the 60° polarizer?

A) $I_3 = I_1$

B) $I_3 = \frac{1}{2} I_1$

C) $I_3 = \frac{1}{4} I_1$

$$E_3 = \frac{E_1}{\sqrt{2}} \quad I \propto E^2 \quad \rightarrow \quad I_3 = \frac{1}{2} I_1$$



NOTE: This does not depend on θ !