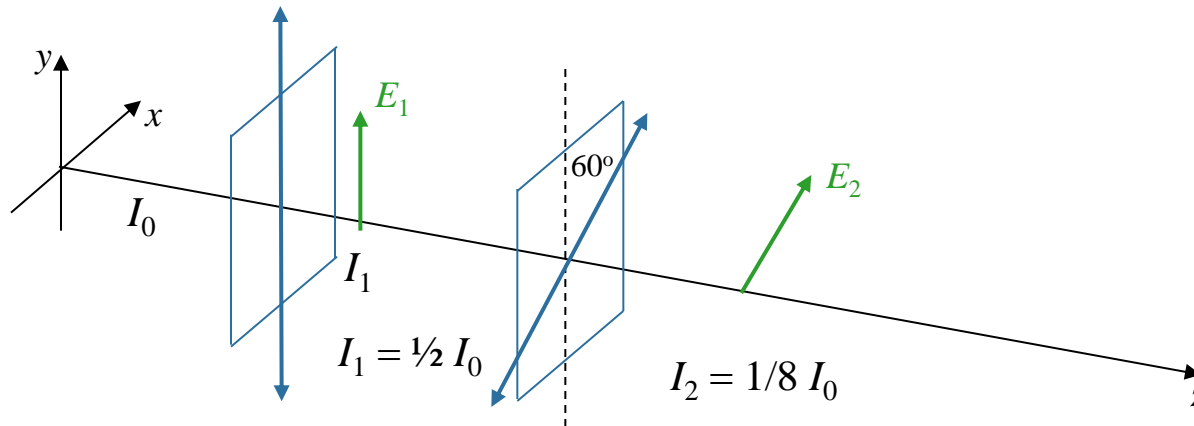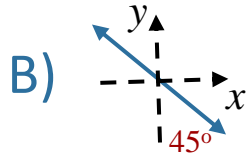# Follow-Up 3

Consider light incident on two linear polarizers as shown. Suppose $I_2 = 1/8 \ I_0$

What is the possible polarization of the input light?

A) LCP

B)

C) un-polarized

D) all of above

E) none of above

After first polarizer: LP along y–axis with intensity I_1

After second polarizer: LP at 60° wrt y–axis

Intensity: $I_2 = I_1\cos^2(60^o) = \frac{1}{4} \ I_1$

$I_2 = 1/8 \ I_0 \Rightarrow I_1 = \frac{1}{2} \ I_0$

Question is: What kind of light loses ½ of its intensity after passing through vertical polarizer?

Answer: Everything except LP at θ other than 45°