Postlab 4: Polarization:

1. One of your lab activities was sticking a third polarizer between crossed polarizers and watching as you rotated it. Assuming you have ideal polarizers, calculate the maximum intensity you can get through 3 linear polarizers with the first and third polarizers having their transmission axes perpendicular to each other. You are starting with unpolarized light of intensity of I_0, half of which goes through the first polarizer.
2. If you instead had 2 polarizers between the crossed polarizers, what would be the maximum intensity you could get through the entire combination? Is it more or less than what you found in part 1?
3. What might you imagine you might get for a maximum transmitted intensity if you had an infinite number of (ideal) polarizers between the crossed polarizers? For extra credit, you may show quantitatively what the answer is.