Name: _____ Date:_____

Lab Section: _____

Pre-Lab: Inverse Square Law and Polarization

1. If the intensity of a lamp is I_2 at a distance of 2 meters from the lamp, what is the intensity of the lamp at a distance of 6 meters? 8 meters? Show your work. (Your answer will be in terms of I_2).

2. Assuming ideal polarizers, how is the intensity of the unpolarized light affected when
   a. light passes through a vertical polarizer: _____
   b. light passes through a horizontal polarizer: _____
   c. light passes through two horizontal polarizers: _____
   d. light passes through a vertical and a horizontal polarizer; _____
   e. light passes through two polarizers that are at 60 degrees to each other: _____

3. Show how you got your answer for part 2e.

4. What are you instructed not to do in this experiment?