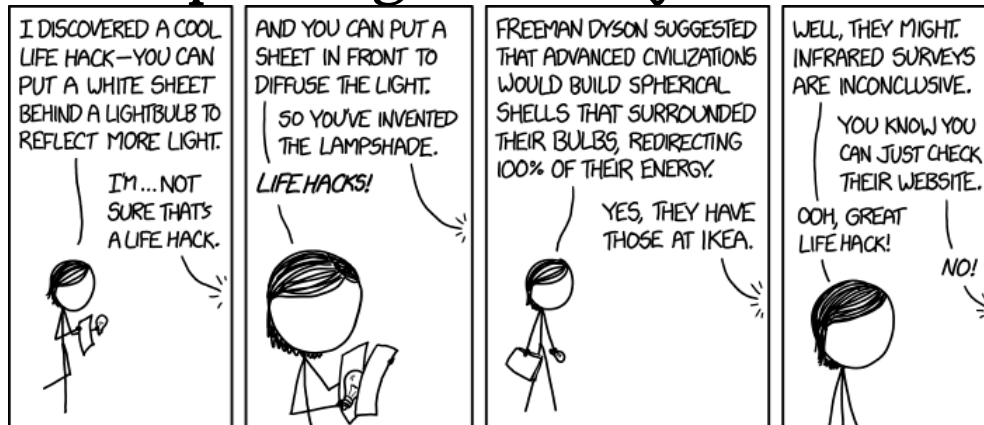


## AP 2 Optics: Light Intensity Whiteboard



1. In a pinhole camera arrangement, explain why increasing the distance from the pinhole to the viewing screen decreases the brightness of the scene reproduction.
2. Light from a tiny light bulb shining through a mask illuminates  $300 \text{ cm}^2$  of a screen placed 10 cm from the bulb. Predict the screen area that would be illuminated at distances of 20 cm, 30 cm, and 1 meter from the bulb.
3. Does the intensity of light from a focused flashlight beam decrease with the square of distance? Why or why not?

