Problem Set #3

Due Tuesday, March 15 by 5pm to Dickinson 104

Unless otherwise indicated, all problems come from "The Cosmic Perspective," 8e

1. Problem 15.50 *The Luminosity of Alpha Centauri A*
2. Problem 15.51 *More Practice with the Inverse Square Law of Light*
3. Problem 15.52 *Parallax and Distance*
4. Star A has a luminosity of 5 $L_\odot$ and a parallax angle of 0.01". Star B has twice the luminosity and half the parallax angle. Which star appears brighter? By what factor (i.e. how many times)? Show your work.