PHYS-333: Problem set #1

Please write neatly and show your work. Please put a box around all your final answers. Answers without a box may not receive credit. Big magnitude answers should be given in scientific notation. Answers generally need only have 2 or 3 significant figures. At the top of your front page, near your own name, please list explicitly the name of all persons with whom you consulted in solving the problems.

1. Exercise 2.2: Parallax of Mars
2. Exercise 3.5: Energy flux and magnitude
3. Exercise 3.6: Angles, magnitudes, inverse square law
4. Exercise 3.7: Galaxies: distance, magnitude, and solid angle (in part d, skip the moon)
5. Exercise 4.2: Equilibrium Temperature of Earth
   Note: Solution needs info from Ch. 5, viz. “Stefan-Boltzmann law” eq. (5.2).