

# PHYS4000 Introduction to Astrophysics HW #4 Due 31 Mar 2017

(1) Maoz, Problem 5.1. Note that the mass function  $dN/dm$  gives the number of stars with mass between  $m$  and  $m + dm$ .

(2) Maoz, Problem 5.2.

(3) Maoz, Problem 6.1. For this derivation, you need to assume that the radius of the star is much less than the orbital radius of the planet, and that  $b < 1$ . For analyzing the data in Figure 6.2, realize that the phase is measured between zero and unity, as a fraction of one orbital period.

(4) Maoz, Problem 6.3.