Problem 1: **Statistics of Mass Fluctuations**
Starting from Ryden 11.70, show that the mean square fluctuations scale as $k^3P(k)$ whenever the power spectrum can be described by a function of the form $P(k) \propto k^n$.

Problem 2: **Number Density of Galaxies**
Ryden 12.1

Problem 3: **Luminosity Density of Galaxies**
Ryden 12.2

Problem 4: **Mass Limits on Galaxies**
Ryden 12.3