

Homework 9

- (20 points)** Solve Cosmological equations for radiation dominated universe for the case of zero Cosmological constant.
- (20 points)** Solve the cosmological equations for the Einstein ' s static universe.
- (20 points)** Obtain solutions of cosmological equations for de Sitter universe for $k = 0, 1, -1$. Graph the t - dependence of the scale factor for these three cases .
- (40 points)** Calculate the Red Shift in the FLRW metric and obtain Hubble ' s law.