

# Stars and Galaxies

## Coursework Sheet 2

1. The two nearest stars, Proxima and Alpha Centauri, have apparent visual magnitudes,  $m_V$ , of 11.0 and 0.0 respectively. How many times fainter is Proxima than Alpha Centauri?  
(3 marks)
2. What is the apparent visual magnitude of the Sun which has an absolute visual magnitude  $M_V=+4.8$ ?  
(2 marks)
3. Proxima and Alpha Centauri are at a distance of 1.3 pc. What are their absolute visual magnitudes and are they intrinsically brighter or fainter than our Sun?  
(2 marks)
4. Two stars have apparent visual magnitudes of 7.9 and 8.6. If they were significantly close on the sky that they appeared as one star what would be its magnitude?  
(3 marks)