HOMEWORK 4 - due May 2. Note some solutions are on the Cambridge University Press web site although try the problems first without using solutions. Also please add some explanation to the published solutions if you use them.

1) Derive equation 2.45 (2.42 second edition)

2) Do problem 3.3 (also 3.3 in second edition)

3) Derive equation 3.29 (also 3.29 in second edition)

4) Do problem 3.7 (3.6 in second edition)

5) Derive equation 3.49 (equation 3.47 second edition)

6) If the reflectivity of an object is 0.3 what is it emissivity and why?

7) What is the binary representation of the number 62. Use an 8-bit unsigned integer.