HW 5_2

1. Work problem 4 at the end of chapter 5.
2. Confirm equation (31) on page 114 in the text book. For the first step use the series provided on page 108, i.e. equation 6. For the 2nd step use integration by parts to solve $\int_0^\infty dx\, \mathrm{x}^3 e^{-sx}$. For the third step use the following series: $\sum_1^\infty \frac{1}{s^4} = \frac{\pi^4}{90}$