

Worksheet #17
Wednesday, May 22, 2024

Name

Question (5 pts):

Consider rotational energies $E_K = BK(K+1)$, where B is the rotational constant and $K = 0, 1, 2, \dots$

(a) What are the frequencies of rotational transitions $\nu_{K+1,K} = (E_{K+1} - E_K)/h$?

(b) Sketch how a rotational spectrum would look like. What are the spacings between the adjacent spectral lines?