Travis Czechorski Homework #2

1. A: **1.87e+10** [1/m]
2. The following graphs are provided

Chart

Description automatically generated

Chart, line chart

Description automatically generated

Chart, line chart

Description automatically generated

Chart, line chart

Description automatically generated

1. Energy states were calculated in units of cm^-1.

[1486.626519952625, 4369.405489660853, 7131.552365773051, 9773.067148289223, 12293.949837209362, 14694.200432533476, 16973.81893426156, 19132.805342393614, 21171.159656929638, 23088.881877869633, 24885.972005213607, 26562.430038961542, 28118.25597911345, 29553.449825669326, 30868.011578629186, 32061.941237993007, 33135.2388037608, 34087.90427593257, 34919.9376545083, 35631.33893948801, 36222.10813087169, 36692.24522865934, 37041.75023285096, 37270.62314344655, 37378.86396044611]

1. Unlike the harmonic oscillator, the energy levels for the anharmonic system are not spread out by a constant value, the space between the levels decreases rapidly.

Working code: <https://github.com/TravisCzechorskiUMaine/Catalysis/blob/main/HW%202%20Final.py>