This assignment was locked May 31 at 11:59pm.

This assignment has TWO parts. Make sure you do both!

For those without books yet... (first two are fir 5.10, the third for 5.12)

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IMG_3662.JPG
IMG_3663.JPG

Part 1 (50 points)

Exercise 5.10 part b in Newman (50 Points)

with $V(x) = (x^8 + 3x^4)$ instead of x^4.

Name your file hw2_10.py

NOTE: Do not start your amplitude at 0! Start at 0.1 and go in steps of 0.01.

Part 2 (50 points)

Do part c of problem 12 of chapter 5 in Newman to calculate the Stefan Boltzmann constant. (50 points)

Note that you do not have to derive the equation in part (a). Use the integral in part (b) and the equation in part (c) to determine the constant. HINT: you don't need to know T!

Use these constants:

hbar = 1.054571e-34
boltz = 1.380649e-23
c = 2.99792e8

Keep 4 significiant digits or equivalently 3 digits after the decimal in your answer.

Name your file hw2_12.py

The output should be:

The Stefan-Boltzmann constant is #.###e###.

NOTE: You may get a runtime warning. You can either ignore it or suppress it. For reference, it looks something like this...

RuntimeWarning: overflow encountered in exp