OSU Academic Integrity Statement

During this quiz you are not to receive information, nor communicate with anyone, about the form, content, length, or difficulty of this quiz. Additionally, you are not to use any unauthorized resources while taking this quiz.

The allowed resources are: any notes you have collected during this course (handwritten, printed, or saved locally on your computer), blank sheets of paper or a digital tablet, writing utensil, a ruler, a protractor, and a non-communicating calculator. **Accessing the internet** while taking the quiz for any reason other than downloading, viewing, or turning in the quiz **is strictly prohibited**.

Receiving information or discussing details about this quiz between the time of its release and a time 48 hours later is stickily prohibited and is in violation of Oregon State University's Code of Student Conduct.

https://studentlife.oregonstate.edu/studentconduct/academicmisconduct

Any incidence of academic misconduct will be dealt with in accordance with Oregon State University's policies.

By submitting your work to Gradescope, you are stating that you have abided and will abide by the rules stated here and the academic integrity statement found in the syllabus on boxsand.org.

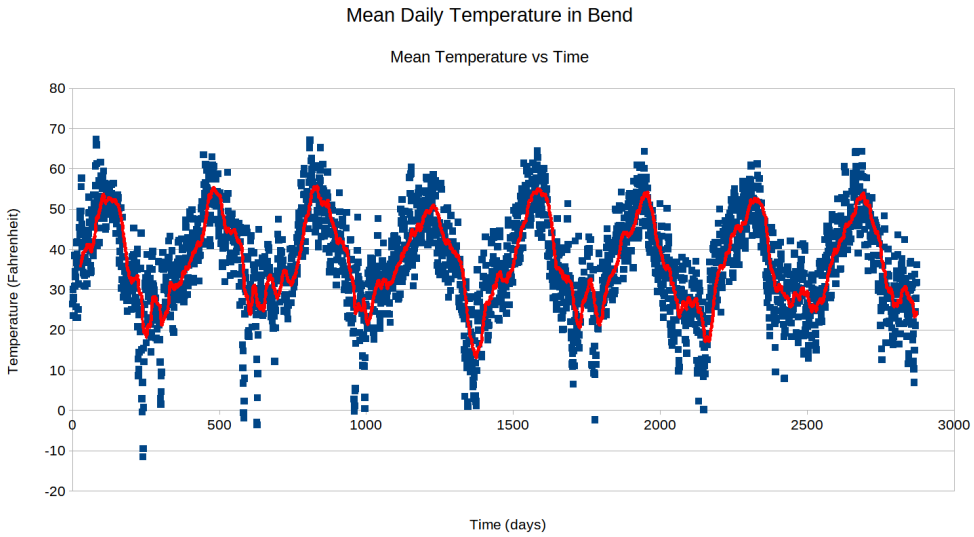
Physics 202

Week 8 quiz | Corvallis

2/24/2020

Collaboration is not allowed. You will have 25 minutes to download this PDF, solve, take pictures, AND upload this exam to Gradescope. You will have an additional 5 minute buffer in case technological issues arise.

The average daily temperature in the town of Bend, OR is plotted with blue dots in the graph below. The time t = 0 days corresponds to April 12th 2013, and the last measurement was taken February 22nd 2021. The red line represents a trendline.



(a) Is the average daily temperature in Bend, Oregon an example of simple harmonic oscillation? Use words, diagrams, equations, etc… to support your answer.

(b) Approximately, what is the average daily temperature's period of oscillation?

(c) Approximately, what is the amplitude of the average daily temperature's oscillation?

(d) Use the red trendline to construct an equation that ***approximately*** describes the oscillation of the temperature as a function of time only, i.e. T(t) = ?