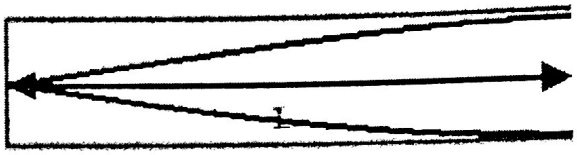
Name: _____

1.2 - Physics Practice Test.

An alien musician lives on the planet Blax. The alien musician is named Flagblum and plays an instrument called a Plumbart. The plumbart is a closed tube instrument consisting of many long glass tubes. The lengths of the closed tubes, musical notes, and the frequency of the notes are listed in the table below.

Musical Note	Tube	Frequency (Hz)	Wavelength (m)	Period (seconds)	Wave Velocity (m/s)
E	10 meters	0.5 Hz			
G	20 meters	0.25 Hz			
A	30 meters	0.167 Hz			
C	40 meters	0.125 Hz			
E	50 meters	0.1 Hz			



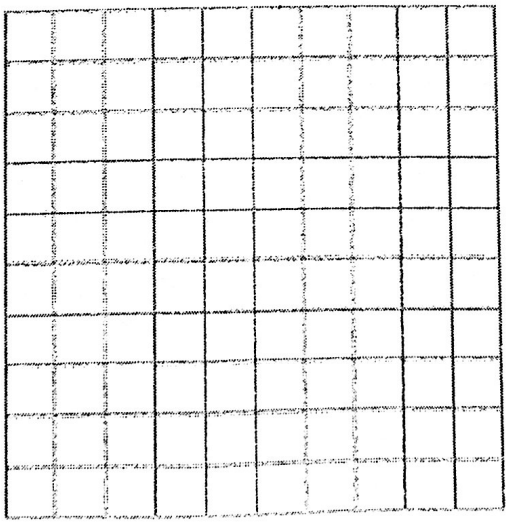
$\lambda = 4L$

1. Determine the wavelength for each note in the table given the diagram for a first harmonic wave in a closed tube above.

2. Determine the Period of each note, given that T=1/f, and record your response in the table above.

3. What is the speed of sound on the planet Blax as determined from this data? (given: $v = f\lambda$)

4. Graph this data on a Period vs. Wavelength graph. Include the following:
   - Relevant title
   - Labeled axis with units
   - Linear and appropriate scaling of axis



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5. A student claims that this data proves one version of the wave equation, $T = \lambda / v$. This is a re-arranged version of $v = f\lambda$. Provide evidence and reasoning from the data table or your graph to justify this student's claim.