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| --- |
|  |
| |  |  |  | | --- | --- | --- | | **Worksheet for Lab on Waves** | **Name** |  | |  |  |  | |  | **Date** |  | |
|  |
| |  |  |  | | --- | --- | --- | |  | **Partner #1** |  | |  |  |  | |  | **Partner #2** |  | |
|  |
| **Items to be turned in:** |
|  |
| **Waves on a String Experiment:** |
|  |
| **1. Data Table #1:** |
|  |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **String Mass (kg)** | **=** |  | **=** | **Nominal Frequency (Hz)** | **=** |  | |  |  |  |  |  |  |  | | **String Length (m)** | **=** |  | **=** | **Length between End Nodes (m)** | **=** |  | | **# Anti-Nodes** | **Mass** | **Tension** | **Wavelength** |  |  |  | | **N** | **(kg)** | **(N)** | **(m)** |  | **Ln(T)** | **Ln(λ)** | | **2** |  |  |  |  |  |  | | **3** |  |  |  |  |  |  | | **4** |  |  |  |  |  |  | | **5** |  |  |  |  |  |  | | **6** |  |  |  |  |  |  | |  |  | **From Plot b** | **=** | **Calculated Frequency (Hz)** | **=** |  | |  |  |  |  |  |  |  | |  |  |  |  | **%error** | **=** |  | |
|  |
|  |
| **2. Properly Formatted ln(λ) vs ln(T) plot** |
|  |
|  |
| **Waves in an Air Column** |
|  |
| **3. Data Table #2** |
|  |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **=** |  |  |  | |  |  |  |  |  | | **Nominal Freq (Hz)** | **=** |  | **Nominal Freq (Hz)** | **=** | |  |  |  |  |  | | **Air Columns** | **Height of Air (m)** |  | **Air Columns** | **Height of Air (m)** | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | | **Wavelengths** | **Wavelengths (m)** |  | **Wavelengths** | **Wavelengths (m)** | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | | **Calculated Frequency (Hz)** | **=** |  | **Calculated Frequency (Hz)** | **=** | |  |  |  |  |  | | **%error** | **=** |  | **%error** | **=** | |
|  |