

## Task

Determine a procedure in which you could determine the speed of sound?

Materials: Given a container filled with water, a pipe with cm markings, and a tuning fork.

## Assignment

1. Procedure

Certain lengths will form standing waves, which is associated with the first harmonic wave

2. Data

Frequency: 349.23

0.24m

3. Results

a. According to your lab, what is your calculation of the speed of sound? Show work.

Because this is a closed tube:

$$v = \lambda f$$

$$\lambda_1 = 4L$$

$$v = 335.261 \frac{m}{s}$$

b. Calculate percent error of your results.

$$E = \frac{|A-C|}{A} = 0.022563 = 2.2563\%$$