**Standing Wave notes** 3/19/15

A standing wave is a wave that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_on each end and travels through

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_points called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The moving parts of the waves are called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Example of Standing waves: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

<https://cobbk12.blackboard.com/webapps/blackboard/content/listContent.jsp?course_id=_19807_1&content_id=_1004847_1&mode=reset>

<https://www.youtube.com/watch?v=RNt8d6vJj8c>

**Drawing Harmonics:**

1st Harmonic:

2nd Harmonic:

3rd Harmonic:

4th Harmonic:

5th Harmonic:

Formula:

L = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ measured in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_---- just a number

λ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ measured in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Example:

A guitar string is 0.8 m long and is vibrating as the 5th harmonic. It completes 100 cycles in 0.25 seconds. What is the…..

a. frequency?

Formula:

Plug in numbers:

Solve:

b. period?

Formula:

Plug in numbers:

Solve:

c. wavelength?

Formula:

Plug in numbers:

Solve:

d. speed?

Formula:

Plug in numbers:

Solve: