Standing Wave Quiz

Due May 23 at 1pm   **Points** 10   **Questions** 5   **Available** May 18 at 12am - May 23 at 1:30pm 6 days
Time Limit None

Instructions

These questions come directly from the lab manual and the Pre-Lab resources section of the modules, please be sure to read before taking the quiz. Check and make sure your answers are in the appropriate units. You have only one attempt at the quiz.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	4591 minutes	6 out of 10

Score for this quiz: **6** out of 10
Submitted May 21 at 4:18pm
This attempt took 4591 minutes.

Question 1   2 / 2 pts

A 9.6 kHz sine wave travels along a string with a velocity of 201.0 m/s, determine the wavelength of the wave in meters. Give your answer to two significant digits.

Correct!

> 0.0200

Correct Answer   0.02   margin of error +/- 0.005

Question 2   2 / 2 pts

Given the following wave function $y = A \sin\left(\dfrac{2.5}{m}\left\{x - \left(5.4\dfrac{m}{s}\right)t\right\}\right)$, where m is

unit of meters. Compare this equation to the equation given for a wave in your lab manual.
 Determine the frequency of the wave in Hz.

Correct!

2.1500

Correct Answers

Between 2.1 and 2.15
0.0 (with margin: 0.0)

Question 3   2 / 2 pts

A standing wave is set up on a string of length 1.18 m. Determine the frequency of the third mode of the wave if the velocity is 206.0 m/s. Give your answer to one decimal place.

Correct!

261.9000

Correct Answer

261.9   margin of error +/- 0.05

Question 4   0 / 2 pts

Given the set-up on page 88 of the lab manual, find the velocity in m/s of a standing wave set up on a string with mass per unit length μ, of $20.0\dfrac{g}{m}$. The hanging weight has a mass of $623.0g$.
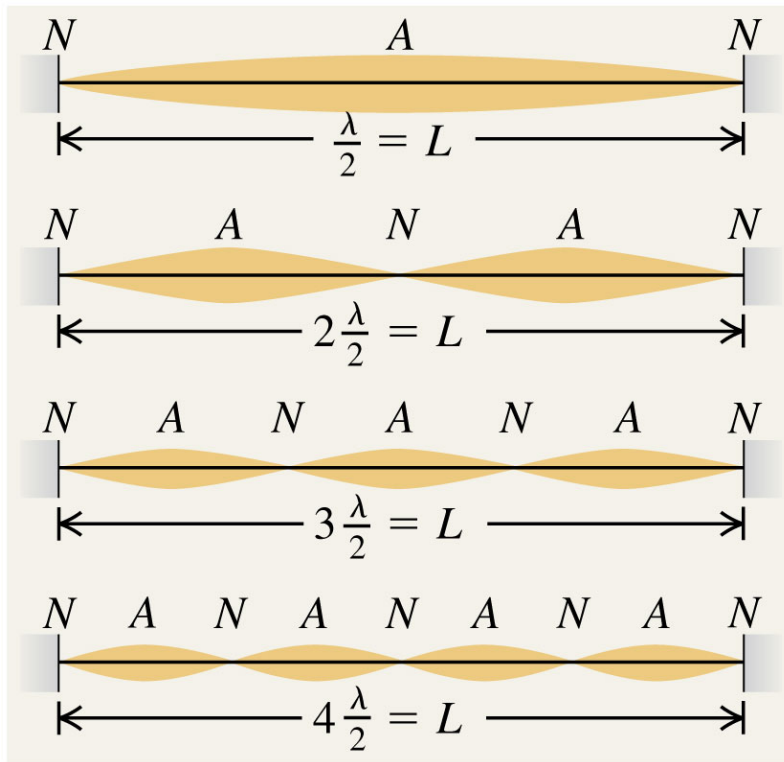
You Answered

5.5300

Correct Answer

17.5   margin of error +/- 0.1

Question 5   0 / 2 pts

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Shown in the image are the various harmonic modes for a standing wave on a string. What is the wavelength in terms of L for the 3rd mode? Give your answer as a fraction.

You Answered

(2/3)L

Correct Answers

2L/3

(2L)/3

(2*L)/3

2*L/3

Quiz Score: **6** out of 10