

Transverse Waves

Name _____ Date _____

Source Notes:

This lab was modeled after the “Wave Properties” lab #25
“Laboratory Physics”, Murphy Doyle, Merrill, 1990.
ISBN 0-675-02477-3

Jim Haine - Wissahickon High School, Ambler PA.
1997(?)
Modified 2010

Teacher Notes:

Modifications:

This experiment is still very similar to the Merrill version. This version is meant to be completed within a single class period as the teacher takes care of some of the trickier sections in the old lab.

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Important Equations:


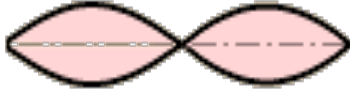

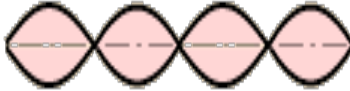
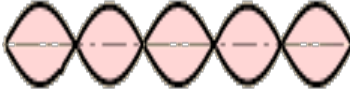
$$f = 1 / T$$

$$\lambda = 2L/n$$

$$v = f \lambda$$

Data and Calculations:

Length of the spring= _____

Harmonic	Time (20)	Period	f	λ	v
 Fundamental 1					
 2					
 3					
 4					
 5					
Average Velocity					

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Observations:

1. As you send pulses down to your partner, describe the reflected pulse.

2. What would you have to do in order to:

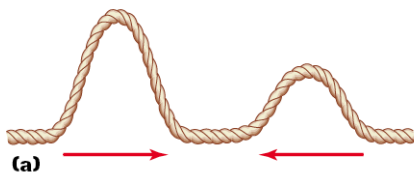
a) increase the frequency

b) increase the wavelength

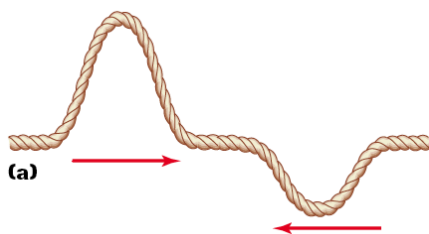
c) increase the amplitude

d) increase the speed

3. Have each partner send a pulse at the same time. Try to time it so that the two pulses meet near the middle of the spring.



a) describe the result of two pulses meeting “in Phase”



b) describe the result of two pulses meeting “out of Phase”