Physics 151 Worksheet #10: Wave Motion

Name: _____ Partner(s): _____

Directions : Complete the following questions based on the computer simulations. Please show all of your work and explain all of your reasoning. Place boxes around your final answers.

Simulation #1: **Parameters of a Traveling Wave**
Determine the equation of the wave for the λ = 4.0 m, amplitude = 4.0 m, and period = 4.0 s simulation.

Answer =	

Determine the values of the unknown variables on your worksheet and show all relevant calculations.

Answer =	
Answer =	
Answer =	

Simulation #2: Superposition of Waves
Run the simulator for the following combinations of variables and describe the pattern that you see.

Superposition	1st λ	1st Amp	1st v	2nd λ	2nd Amp	2nd v
#1	2	1	2	2	1	-2
#2	2	1	1	8	1	-1

Superposition #1:

Superposition #2:

Simulation #3: Standing Waves on a String
Determine the wavelength and frequency of the 7th harmonic on your worksheet and show all relevant calculations.

Answer =	
Answer =	

Determine the unknown harmonic on your worksheet and show all relevant calculations.

Answer =	