

Name:

Student ID:

## Physics 9HC DL#3 Lab Report

### I. Creating Harmonics

1. Create a standing wave with 3 antinodes for both the medium and high tension settings.

#### **medium tension**

- a. Attach a screen capture of your standing wave.
- b. Show the calculations used to construct this standing wave.

#### **high tension**

- a. Attach a screen capture of your standing wave.
- b. Show the calculations used to construct this standing wave.

2. What is the amplitude of the standing wave? Explain how this fits correctly with the mathematics of standing waves.

3. Create a standing wave with any tension that keeps all of the green beads stationary.
  - a. Attach a screen capture of your standing wave.
  - b. Show the calculations used to construct this standing wave.

## II. One End Free

4. Explain why a precise frequency for any standing wave with a free end in this simulator must include at least 3 decimal places.

5. Attach a screen capture of an approximate standing wave with a free end, using a rounded-off frequency.