Name: _____

1. For this lab, the wave equation was $y(x,t) = A\sin\left(2\pi ft - 2\pi\dfrac{x}{\lambda}\right)$.

During this lab, you were given or you computed various constants for the wave. Report your values for the constants listed in the box to the right. Include units.

$A =$

$f =$

$\lambda =$

$T =$

$V =$

2. You also estimated the wave speed for a duration of ¼T. What were Δx and V_{est} for this estimate?

$\Delta x =$

$V_{est} =$

3. How far D will the wave move in one period? Answer both as a numerical value, and in terms of the symbols in the above tables. Explain this result.

$D_{value} =$

$D_{symbolic} =$

4. What is the maximum speed of a particular particle in this string? Show how you computed this value.

$V_{max\,particle} =$

5. Look at the equation in question 1. Then, write a similar equation which describes the motion of a periodic wave moving in the opposite direction. Do not substitute numerical values.

$$y(x, t) =$$

6. Consider yet another variant of this wave equation: $y(x,t) = A\sin\left(2\pi\dfrac{x}{\lambda} - 2\pi ft\right)$. What direction do you think this wave will move? Explain.