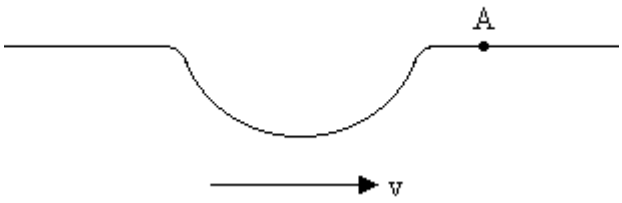
**PHYS 1403**
**Lab Homework – Waves**

**This homework will be due when you come to lab the week of May 1.**

1) A pulse of the shape shown below propagates to the right along a string with velocity v.

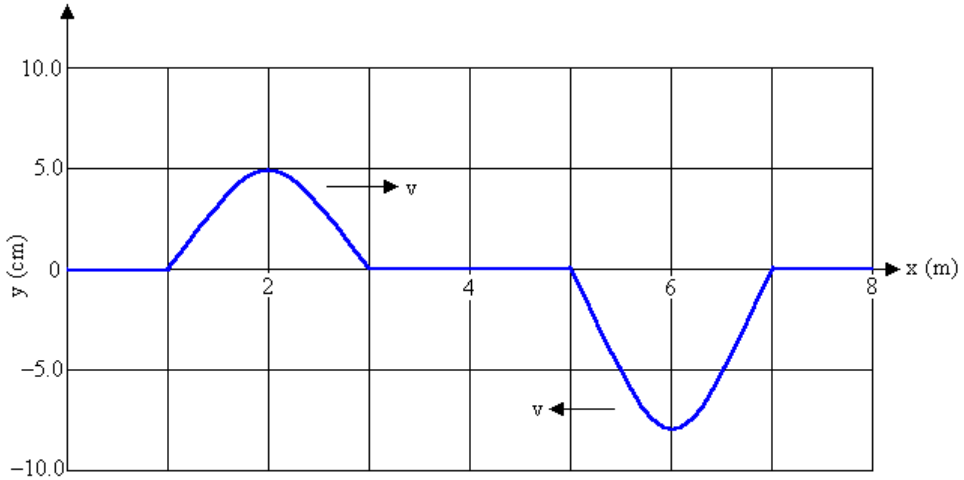



Describe in *detail* the motion of particle A on the string as the pulse goes by. Be sure to indicate

(i) the direction in which A is moving at various points along the pulse

(ii) and whether the velocity of A is increasing, decreasing or zero at these various points.

2) The diagram below shows two pulses on a string at time t = 0.




The pulses are moving toward each other, the speed of each pulse is 2.5m/s. **ON A SEPARATE SHEET OF GRAPH PAPER** sketch the shape of the string at 0.60, 0.80 and 0.90s. (Graphs sketched on notebook paper rather than graph paper will receive no credit.)

3) A standing wave has nodes at $x = 0$ cm, $x = 6.0$ cm, $x = 12.0$ cm, and $x = 18.0$ cm. What is the wavelength of the waves that are interfering to produce this standing wave? At what positions are the antinodes?