Physics 322

1. How would you represent a longitudinal wave graphically?

2. The diagram below shows the number of particles at various discreet locations (the boxes) at some instant in time. Each dashed line indicates the position for that "box" of particles. Make a graph of the density of particles (# particles per volume) as a function of position based on this diagram. Connect the dots and describe the shape of the curve.
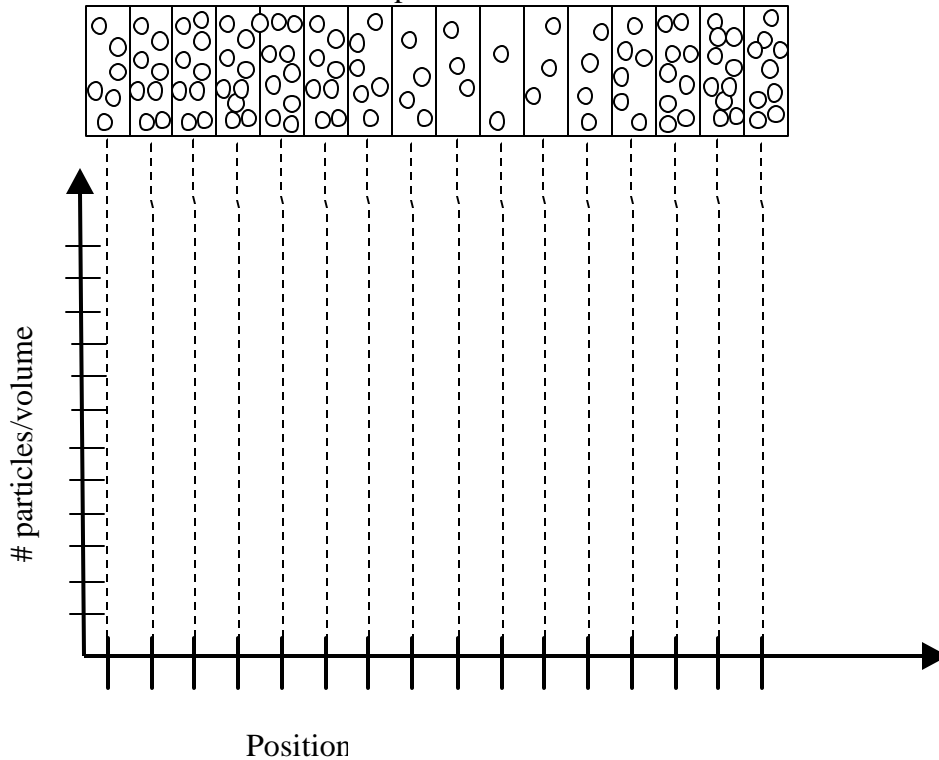


If this represents a wave, what type of wave (transverse or longitudinal) is shown in this situation? How do you know? Explain.

3. Sound can be produced using a speaker. How does a speaker vibrate to produce a sound wave? Based on this information, what type of wave is a sound wave?

4. Consider a wave traveling on a string. How would you wiggle your hand to produce this wave? What type of wave is this wave on the string?