Standing Waves Prelab
Due start of class, week of Dec 3

Name:____ Section:____________

A string of mass 3 gm is 1.6 m long, fixed at both ends, and set into transverse vibration at a frequency of 100 Hz.

a) For what string tension will standing waves be set up so that there are no nodes other than those at the ends of the string ? Show your calculation.

b) For what tension will the string vibrate with one node at the exact center (ends are always nodes)?

c) Suppose that the speed of sound depended strongly on frequency. How would that affect conversation and our enjoyment of music?