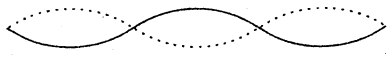
1. The intensity of sound 20 meters from a race car is 0.0100 W/m^2.

(A) What is the sound intensity level in dB?

(B) What would the intensity (in W/m^2) be at a distance 80 m from the car? Find the corresponding intensity level in dB.

2. Suppose a violin player touches the "A" string 1/3 of the distance from the end, which produces a harmonic as shown. The length of an "A" string is 45 cm, and its fundemental frequency is 440 Hz.



(A) Find the frequency heard.

(B) Find the speed of waves on the string.