HW 12-1 Soln)

We know that the first resonant situation will have a node at the water's surface and an antinode at the tube's opening. This corresponds to one quarter wavelength.

The second length should then be three quarters wavelength, and 0.24 m fits the bill. The next length will be five quarters of a wavelength or 5×0.08 = 0.40 m.

The frequency is found from v = fλ or f = v/λ = 340/(4×0.08) = 1063 Hz.