Asterisks for "Harmonics on Strings and Pipes"

* - Q10) $\lambda_1 = 2.5(2) = 5.0$ m, so $\lambda_8 = 5.0/8 = 0.625$ m.   OR $\lambda_8 = 2(2.5)/8$ Q14) f   Q18) 0.739 m   Q29) $\lambda = 4L/n$ Q30) only odds (evens have a node at the end)   Q31) $\lambda_1 = 4L = 4(.6) = 2.4$ m, $\lambda_3 = 2.4/3 = .8$ m (and H_2 doesn't exist).   Q36) H_2 looks like:

Q38) all of them.   Q39) same as for strings: $\lambda = 2L/n$ Q40) open so: $\lambda_1 = 2L = 2(.8) = 1.6$m; $\lambda_3 = 1.6/3 = 0.53$ m

Q41) B: 3m; D: $f_1 = 150$ Hz; $f_2 = 300$ Hz, etc. F: 2.9 m/s; Q42) B: 6 m; D: all harmonics possible, so just multiply f_1 by 1,2,3

Q43) B: 1.6 m; D: only odd harmonics this time (close pipe). Q44) A: $\lambda_1 = 4(.2) = 0.8$ m; $f_1 = 1275/3 = 425$ Hz B: v = 340 m/s