

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Your name		Date												
2	Partner's name														
3															
4	Phys 1101/1120 - Richmond campus			DISCLAIMER: These example data are purposefully inaccurate. You may test your spreadsheet equations for correctness using these values, but your real experimental values will be very different.											
5	Mini-Lab: Resonance of Air Columns														
6															
7	DATA:														
8															
9	Frequency of tuning fork:			Position of first harmonic:											
10	f (Hz)	df (Hz)	df/f	L (cm)	dL (cm)	dL/L									
11	100	7	7.00%	85	0.5	0.59%									
12	200	7	3.50%	43	0.5	1.16%									
13	300	7	2.33%	28	0.5	1.79%									
14	550	7	1.27%	15.5	0.5	3.23%									
15	1500	7	0.47%	5.5	0.5	9.09%									
16	3500	7	0.20%	2.5	0.5	20.00%									
17															
18	CALCULATIONS:														
19															
20	Inverse of Frequency:			Position of first harmonic:			From Linegraph			Speed of sound in air:					
21	1/f (s)	d(1/f) (s)	d(1/f)/(1/f)	L (m)	dL (m)	dL/L	slope (m/s)	dslope (m/s)	dslope/slope	v (m/s)	dv (m/s)	dv/v			
22	0.01	0.0007	7.00%	0.85	0.005	0.59%	85.148	7.1214	8.36%	340.592	28.4856	8.36%			
23	0.005	0.000175	3.50%	0.43	0.005	1.16%									
24	0.003333	7.7778E-05	2.33%	0.28	0.005	1.79%									
25	0.001818	2.314E-05	1.27%	0.155	0.005	3.23%									
26	0.000667	3.1111E-06	0.47%	0.055	0.005	9.09%									
27	0.000286	5.7143E-07	0.20%	0.025	0.005	20.00%									