	A	B	C	D	E	F	G	H	I	J	K	L
1	Your name		Date									
2	Partner's name											
3												
4	**Phys 1101/1120 - Surrey Campus**				**DISCLAIMER: These example data are purposefully**							
5	**Expt. 1: Acceleration on an Incline**				**inaccurate. You may test your spreadsheet equations**							
6					**for correctness using these values, but your real**							
7	**DATA**				**experimental values will be very different.**							
8												
9	**Width of flag:**				**Travel time of glider:**				**Time of flag passing through photogate:**			
10	**d (cm)**	**δd (cm)**	**δd/d**		**tD (s)**	**dtD (s)**	**dtD/tD**		**tf (s)**	**dtf (s)**	**dtf/tf**	
11	**6**	**0.05**	0.83%	1	**3.816**	**0.15**	3.93%	1	**0.143**	0.00143	1.00%	
12				2	**3.894**	**0.15**	3.85%	2	**0.144**	0.00144	1.00%	
13	**Initial position, glider**			3	**3.848**	**0.15**	3.90%	3	**0.145**	0.00145	1.00%	
14	**D1 (cm)**	**dD1 (cm)**	**dD1/D1**	4	**3.809**	**0.15**	3.94%	4	**0.144**	0.00144	1.00%	
15	**4**	**0.05**	1.25%	5	**3.764**	**0.15**	3.99%	5	**0.144**	0.00144	1.00%	
16				6	**3.871**	**0.15**	3.87%	6	**0.144**	0.00144	1.00%	
17	**Final position, glider**			7	**3.801**	**0.15**	3.95%	7	**0.144**	0.00144	1.00%	
18	**D2 (cm)**	**dD2 (cm)**	**dD2/D2**	8	**3.829**	**0.15**	3.92%	8	**0.144**	0.00144	1.00%	
19	**84**	**1**	1.19%	9	**3.811**	**0.15**	3.94%	9	**0.143**	0.00143	1.00%	
20				10	**3.794**	**0.15**	3.95%	10	**0.143**	0.00143	1.00%	
21				11	**3.789**	**0.15**	3.96%	11	**0.144**	0.00144	1.00%	
22				12	**3.865**	**0.15**	3.88%	12	**0.144**	0.00144	1.00%	
23				13	**3.786**	**0.15**	3.96%	13	**0.144**	0.00144	1.00%	
24				14	**3.762**	**0.15**	3.99%	14	**0.145**	0.00145	1.00%	
25				15	**3.818**	**0.15**	3.93%	15	**0.143**	0.00143	1.00%	
26				16	**3.891**	**0.15**	3.86%	16	**0.143**	0.00143	1.00%	
27				17	**3.82**	**0.15**	3.93%	17	**0.145**	0.00145	1.00%	
28				18	**3.804**	**0.15**	3.94%	18	**0.144**	0.00144	1.00%	
29				19	**3.812**	**0.15**	3.93%	19	**0.144**	0.00144	1.00%	
30				20	**3.79**	**0.15**	3.96%	20	**0.143**	0.00143	1.00%	
31												
32												
33	**CALCULATIONS:**											
34												
35	**Width of flag:**				**Average travel time of glider:**				**Average time of flag passing photogate:**			
36	**d (m)**	**δd (m)**	**δd/d**		**tD_ave (s)**	**dtD_ave (s)**	**(dtD/tD)_ave**		**tf_ave (s)**	**dtf_ave (s)**	**(dtf/tf)_ave**	
37	0.06	0.0005	0.83%		3.8187	0.0168804	0.44%		0.14385	0.0003	0.21%	
38												
39	**Initial position, glider**											
40	**D1 (m)**	**dD1 (m)**	**dD1/D1**		Note: Uncertainties based on v = d / t							
41	0.04	0.0005	1.25%									
42					**Experimental values of acceleration:**							
43	**Final position, glider**				**a1 (m/s^2)**	**da1 (m/s^2)**	**da1/a1**					
44	**D2 (m)**	**dD2 (m)**	**dD2/D2**		0.1097208	0.0016813	1.53%					
45	0.84	0.01	1.19%									
46					**a2 (m/s^2)**	**da2 (m/s^2)**	**da2/a2**					
47	**Displacement of glider:**				0.109226	0.0010552	0.97%					
48	**D (m)**	**dD (m)**	**dD/D**									
49	0.8	0.010012	1.25%		**a3 (m/s^2)**	**da3 (m/s^2)**	**da3/a3**					
50					0.1087334	0.0023112	2.13%					
51	**Final velocity of glider:**											
52	**v (m/s)**	**dv (m/s)**	**dv/v**									
53	0.417101	0.003583	0.86%									