Practicum 2: Numerical Simulation: Air Drag on a Falling Object

Name:

Date:

Parameters	**Value**	**Units**
Mass (m) =	0	
Acc due to grav (g) =	9.81	
Drag parameter (b) =	0	
Time interval (del_t) =	0.0005	
Start time (t_0) =	0.025	
Start position (y_0) =	0.007187	
Start velocity (v,y_0) =	0.208286	

Experimental Data

t (s)	y (m)	v_y (m/s)
0.025	0.007187	0.208286
0.05	0.000642	0.432793
0.075	0.032541	0.600685
0.1	0.027742	0.694313
0.125	0.065625	0.777047
0.15	0.065683	0.893928
0.175	0.107507	0.852548
0.2	0.110765	1.018044
0.225	0.155185	1.034378
0.25	0.160549	1.027495
0.275	0.186679	1.044367
0.3	0.213431	1.040619
0.325	0.260688	1.133403
0.35	0.288354	1.131987
0.375	0.316352	1.099748
0.4	0.32462	1.144239
0.425	0.353108	1.149947
0.45	0.381772	1.177106
0.475	0.430581	1.204776
0.5	0.439507	1.175546
0.525	0.468528	1.133629
0.55	0.517626	1.105502
0.575	0.526787	1.160574
0.6	0.555998	1.102611
0.625	0.58525	1.109048

Simulation Data

t (s)	y (m)	v_y (m/s)	a_y (m/s^2)