Experiment 1: Variable mass of bob (also slightly variable string length and bob shape)						Experiment 1: Values for plotting		
mass (g)	string length (cm)	amplitude	time total (s)	period (s)		mass (kg)	time run 1 (s)	time run 2 (s)
20	60.5	10°	15.28	1.528		20	1.528	1.544
20	60.5	10°	15.44	1.544		70	1.547	1.537
70	60.5	10°	15.47	1.547		120	1.537	1.544
70	60.5	10°	15.37	1.537		170	1.522	1.537
120	60.5	10°	15.37	1.537		220	1.532	1.535
120	60.5	10°	15.44	1.544		270	1.509	1.528
170	60.5	10°	15.22	1.522				
170	60.5	10°	15.37	1.537				
220	60.5	10°	15.32	1.532				
220	60.5	10°	15.35	1.535				
270	60.5	10°	15.09	1.509				
270	60.5	10°	15.28	1.528				

Experiment 2: Variable string length						Experiment 2: Values for plotting		
mass (g)	string length (cm)	amplitude	time total (s)	period (s)		string length (m)	time run 1 (s)	time run 2 (s)
65	7.75	10°	5.53	0.553		0.0775	0.553	0.563
65	7.75	10°	5.63	0.563		0.155	0.751	0.759
65	15.5	10°	7.51	0.751		0.31	1.043	1.053
65	15.5	10°	7.59	0.759		0.62	1.45	1.463
65	31	10°	10.43	1.043		1.24	2.056	2.056
65	31	10°	10.53	1.053				
65	62	10°	14.5	1.45				
65	62	10°	14.63	1.463				
65	124	10°	20.56	2.056				
65	124	10°	20.56	2.056				

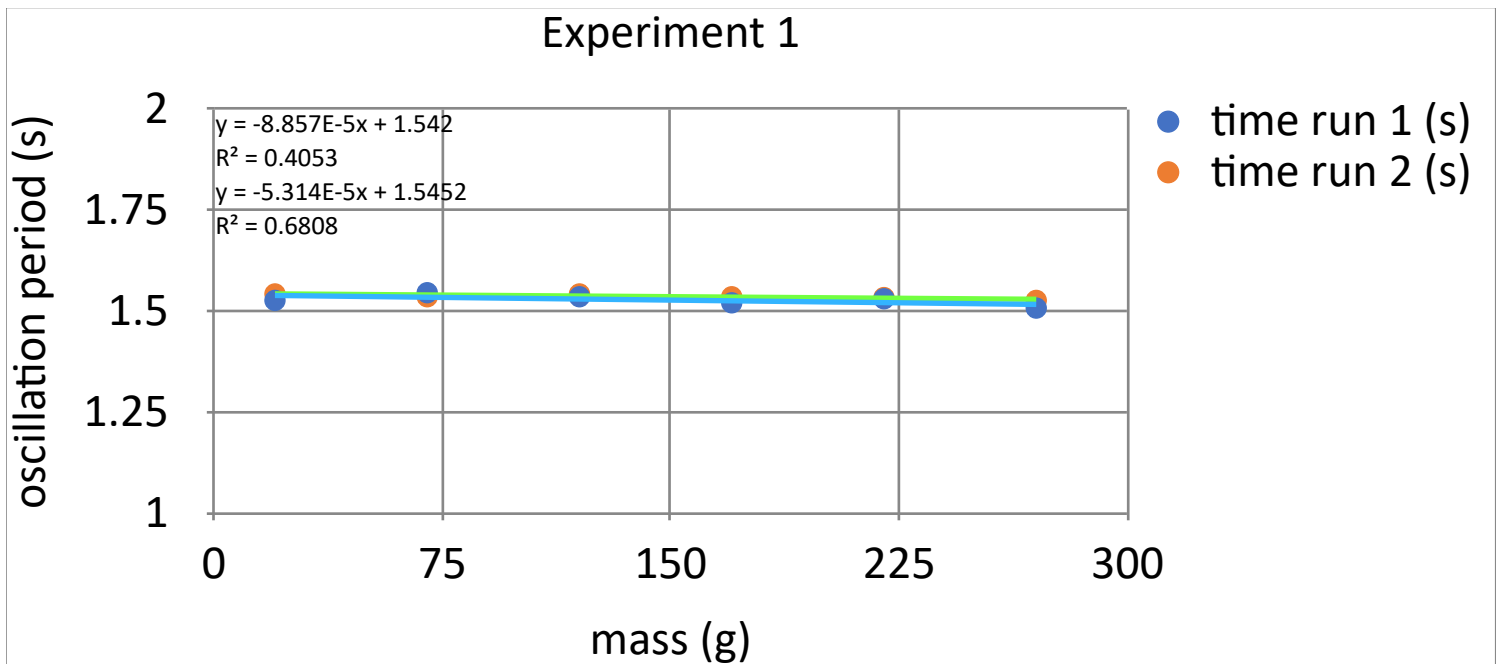| Experiment 3: Variable mass by keeping the shape and string length						Experiment 3: Values for plotting		
mass (g)	string length (cm)	amplitude	time total (s)	period (s)		mass (g)	time run 1 (s)	time run 2 (s)
65	62	10°	14.5	1.45		65	1.45	1.463
65	62	10°	14.63	1.463		6	1.435	1.447
6	62	10°	14.35	1.435				
6	62	10°	14.47	1.447				

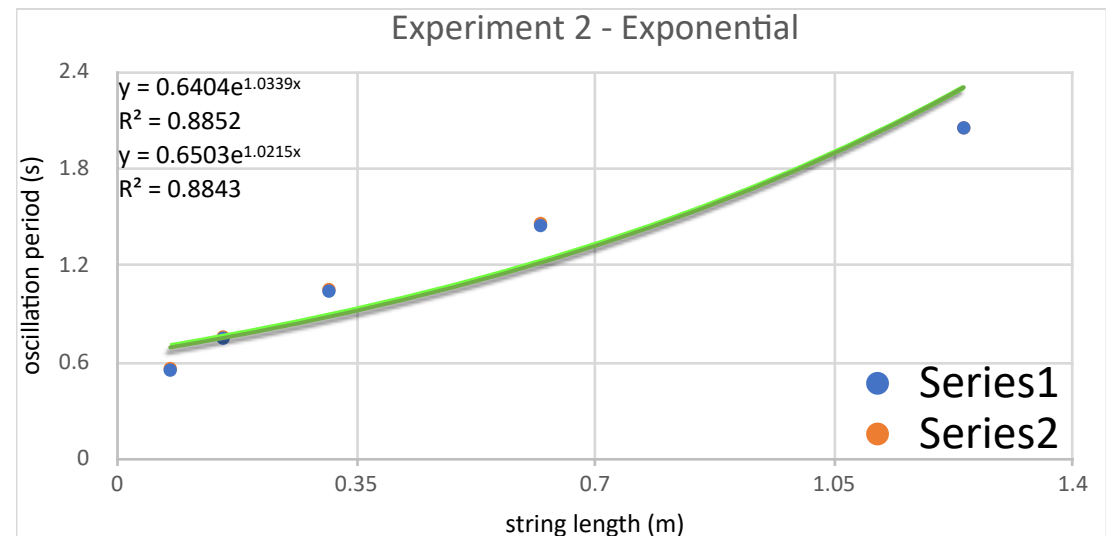Fig 2. Oscillation period of a simple pendulum under variable bob masses

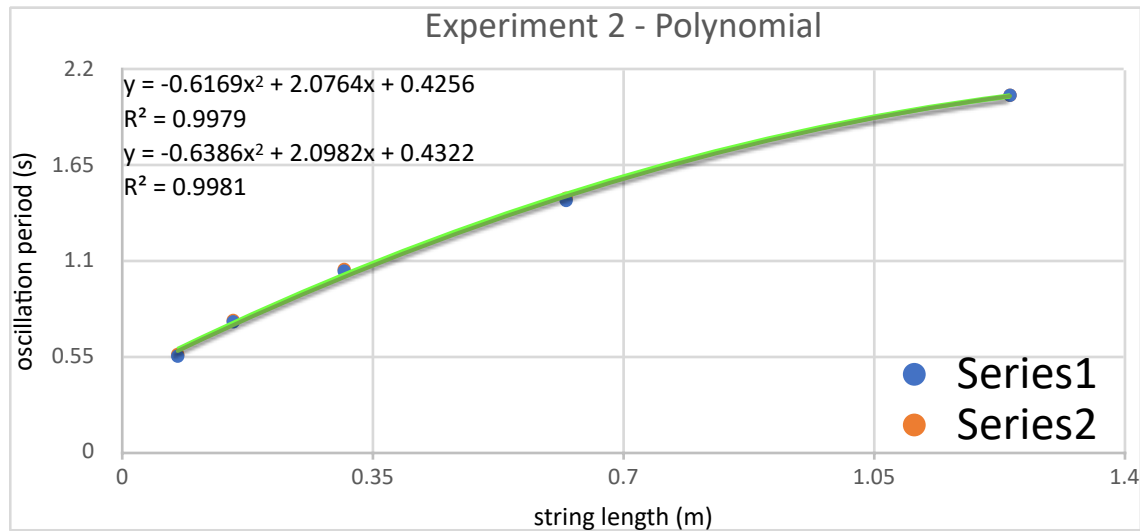Fig 3. Oscillation period of a simple pendulum under variable string lengths, exponential trend line

Fig 4. Oscillation period of a simple pendulum under variable string lengths, polynomial trend line
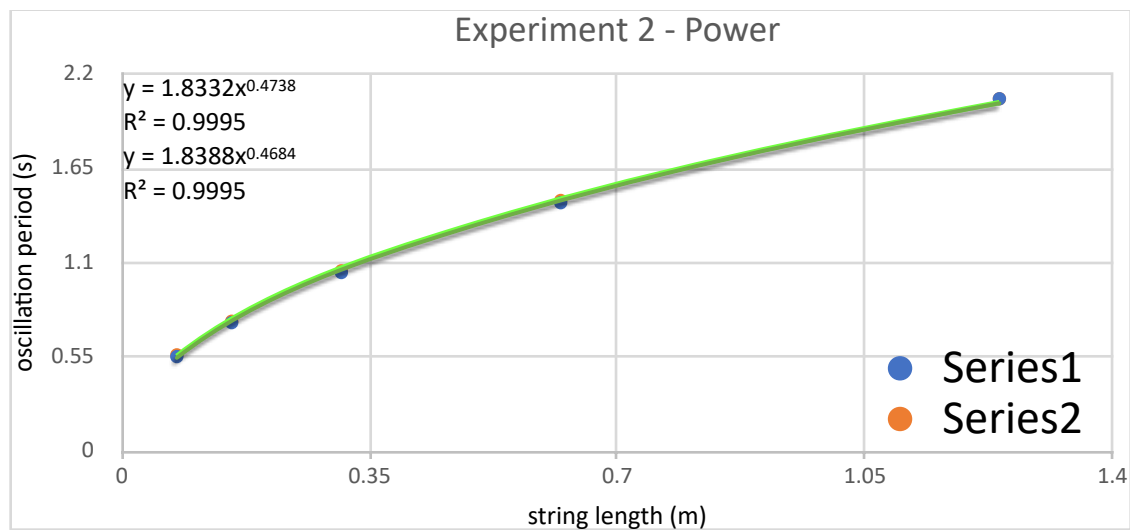

Fig 5. Oscillation period of a simple pendulum under variable string lengths, power trend line
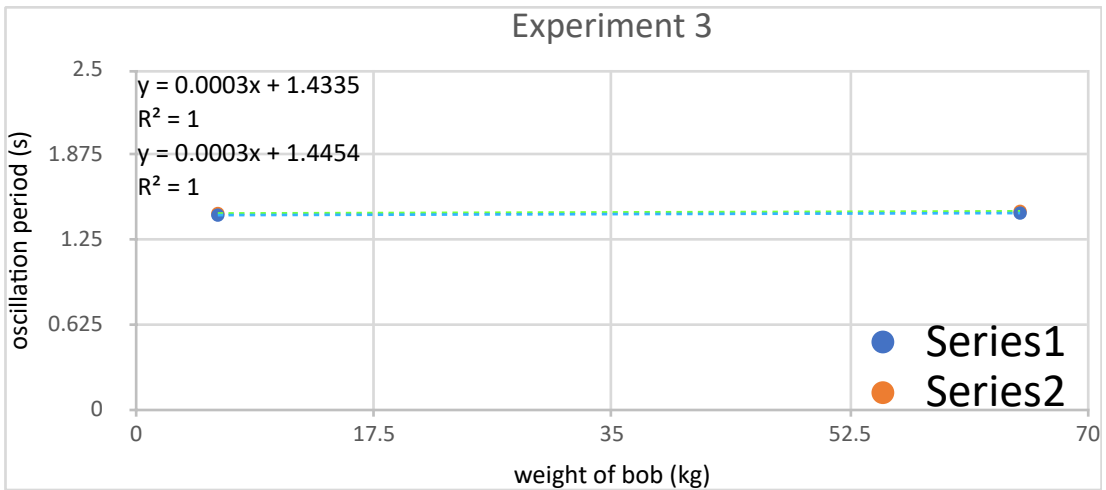

Fig 6. Oscillation period of a simple pendulum under variable mass and constant shape