

Physics 1 Lab

Experiment 2: Verification of Newton's second law by Atwood Machine.

Data Table: **M, m, D and t for group 1 to 4.**

M (gm)	m (gm)	Group 1		Group 2		Group 3		Group 4	
		Height D (cm)	Time t (s)	Height D (cm)	Time t (s)	Height D (cm)	Time t (s)	Height D (cm)	Time t (s)
500	200	79	0.56	80	0.56	79.5	0.56	79.8	0.56
			0.57		0.57		0.55		0.54
			0.55		0.58		0.54		0.55
475	225	79	0.62	80	0.62	79.5	0.62	79.8	0.61
			0.63		0.63		0.65		0.63
			0.64		0.61		0.64		0.64
450	250	79	0.75	80	0.75	79.5	0.76	79.8	0.75
			0.74		0.76		0.74		0.74
			0.75		0.75		0.75		0.77
425	275	79	0.80	80	0.80	79.5	0.80	79.8	0.80
			0.83		0.81		0.83		0.82
			0.82		0.82		0.79		0.82
400	300	79	0.90	80	0.90	79.5	0.90	79.8	0.90
			0.92		0.92		0.94		0.92
			0.93		0.91		0.93		0.93
375	325	79	1.09	80	1.09	79.5	1.09	79.8	1.09
			1.10		1.12		1.10		1.10
			1.11		1.11		1.13		1.11
350	350	—	0		0		0		0

Data Table: **M, m, D and t for group 5 to 8.**

M (gm)	m (gm)	Group 5		Group 6		Group 7		Group 8	
		Height D (cm)	Time t (s)	Height D (cm)	Time t (s)	Height D (cm)	Time t (s)	Height D (cm)	Time t (s)
500	200	79.4	0.56	79.2	0.56	78.9	0.53	78.8	0.56
			0.57		0.54		0.57		0.58
			0.56		0.55		0.55		0.55
475	225	79.4	0.62	79.2	0.62	78.9	0.62	78.8	0.61
			0.61		0.65		0.63		0.63
			0.64		0.64		0.65		0.64
450	250	79.4	0.75	79.2	0.74	78.9	0.75	78.8	0.76
			0.73		0.74		0.74		0.74
			0.75		0.75		0.74		0.75
425	275	79.4	0.81	79.2	0.80	78.9	0.80	78.8	0.80
			0.83		0.81		0.80		0.82
			0.82		0.82		0.82		0.82
400	300	79.4	0.90	79.2	0.90	78.9	0.89	78.8	0.90
			0.92		0.91		0.92		0.91
			0.92		0.93		0.93		0.93
375	325	79.4	1.08	79.2	1.09	78.9	1.09	78.8	1.09
			1.10		1.09		1.10		1.10
			1.11		1.11		1.12		1.09
350	350	—	0		0		0		0