

Name:
 Period: 3.000

Period 1
 Sean Cordy
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FACTORS THAT AFFECT ACCELERATION LAB

Purpose:

Procedure:

DATA TABLE:

trial	X-Axis 1st F (washers)	<i>measured</i>	<i>measured</i>	<i>measured</i>	<i>measured</i>	<i>measured</i>	<i>calculated</i>	<i>calculated</i>	<i>calculated</i>
		s flag m	s track m	Add mass g	gate 1 t 1 s	gate 2 t 2 s	V1=s flag/t1 v 1 m/s	V2=s flag/t2 v2 m/s	a=(v2*v2-v1*v1)/2s track a m/s/s
1	1	0.025	0.755	0.0	0.074	0.022	0.338	1.136	0.77959464
2	2	0.025	0.755	0.0	0.051	0.016	0.490	1.563	1.45769143
3	3	0.025	0.755	0.0	0.045	0.014	0.556	1.786	1.9073732
4	4	0.025	0.755	0.0	0.039	0.012	0.641	2.083	2.60222775
5	5	0.025	0.755	0.0	0.036	0.011	0.694	2.273	3.10134846
6	6	0.025	0.755	0.0	0.035	0.011	0.714	2.273	3.08283786
7	7	0.025	0.755	0.0	0.032	0.010	0.781	2.500	3.73486651
8	8	0.025	0.755	0.0	0.032	0.010	0.781	2.500	3.73486651
9	9	0.025	0.755	0.0	0.029	0.009	0.862	2.778	4.61780562
10	10	0.025	0.755	0.0	0.028	0.008	0.893	3.125	5.93935836
11	10	0.025	0.755	50.0	0.036	0.010	0.694	2.500	3.81969994
12	10	0.025	0.755	100.0	0.040	0.012	0.625	2.083	2.61566409
13	10	0.025	0.755	150.0	0.044	0.013	0.568	1.923	2.23536045
14	10	0.025	0.755	200.0	0.047	0.014	0.532	1.786	1.92439871
15	10	0.025	0.755	250.0	0.050	0.015	0.500	1.667	1.67402502
16	10	0.025	0.755	300.0	0.052	0.016	0.481	1.613	1.56974686
17	10	0.025	0.755	350.0	0.057	0.016	0.439	1.563	1.48943004
18	10	0.025	0.755	400.0	0.062	0.017	0.403	1.471	1.32452894
19	10	0.025	0.755	450.0	0.064	0.018	0.391	1.389	1.17644004
20	10	0.025	0.755	500.0	0.069	0.019	0.362	1.316	1.05962053

Calculations:

V1=s flag/t1

Graphs: Acceleration vs Force

and

Acceleration vs Mass

Conclusion:

Summary: