Name: class work
Period: 7.000

Period 1
Sean Cordy
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FACTORS THAT AFFECT ACCELERATION LAB

Purpose:

Procedure:

DATA TABLE:

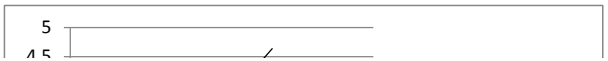
Y-Axis Both Graphs

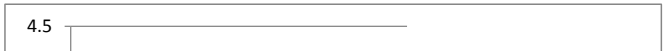
trial	X-Axis 1st F (washers)	s flag m	s track m	Add mass g	gate 1 t 1 s	gate 2 t 2 s	V1=s flag/t1 v 1 m/s	V2=s flag/t2 v2 m/s	a=(v2*v2-v1*v1)/2s track a m/s/s
		measured	*measured*	*measured*	*measured*	*measured*	*calculated*	*calculated*	*calculated*
1	1	0.025	0.755	0.0	0.1044	0.0226	0.239	1.108	0.77572271
2	2	0.025	0.755	0.0	0.0858	0.0171	0.291	1.465	1.36490044
3	3	0.025	0.755	0.0	0.0694	0.0144	0.360	1.733	1.90382879
4	4	0.025	0.755	0.0	0.0633	0.0128	0.395	1.951	2.41828013
5	5	0.025	0.755	0.0	0.0613	0.0119	0.408	2.104	2.82198066
6	6	0.025	0.755	0.0	0.0546	0.0111	0.458	2.249	3.20955789
7	7	0.025	0.755	0.0	0.0511	0.0106	0.489	2.359	3.52736547
8	8	0.025	0.755	0.0	0.0494	0.0102	0.506	2.448	3.79858949
9	9	0.025	0.755	0.0	0.4821	0.0098	0.052	2.553	4.31500264
10	10	0.025	0.755	0.0	0.0440	0.0096	0.568	2.613	4.30967937
11	10	0.025	0.755	50.000	0.0520	0.0105	0.480	2.388	3.62297518
12	10	0.025	0.755	100.000	0.0588	0.0122	0.425	2.053	2.6716427
13	10	0.025	0.755	150.000	0.0663	0.0133	0.377	1.886	2.2623061
14	10	0.025	0.755	200.000	0.0695	0.0141	0.360	1.768	1.98410662
15	10	0.025	0.755	250.000	0.0723	0.0151	0.346	1.656	1.73634195
16	10	0.025	0.755	300.000	0.0876	0.0168	0.285	1.489	1.41501255
17	10	0.025	0.755	350.000	0.0884	0.0177	0.283	1.415	1.27298852
18	10	0.025	0.755	400.000	0.1093	0.0196	0.229	1.275	1.04210313
19	10	0.025	0.755	450.000	0.0946	0.0195	0.264	1.281	1.04106978
20	10	0.025	0.755	500.000	0.1139	0.0207	0.220	1.206	0.93124393

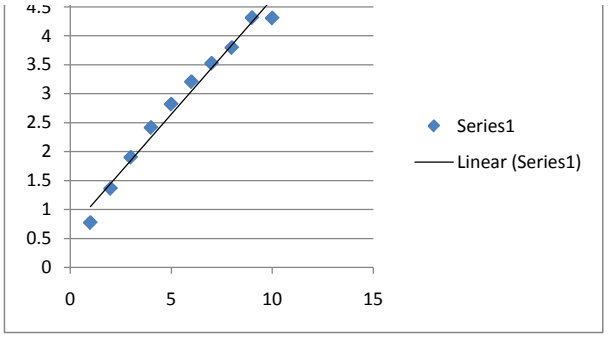
Calculations:

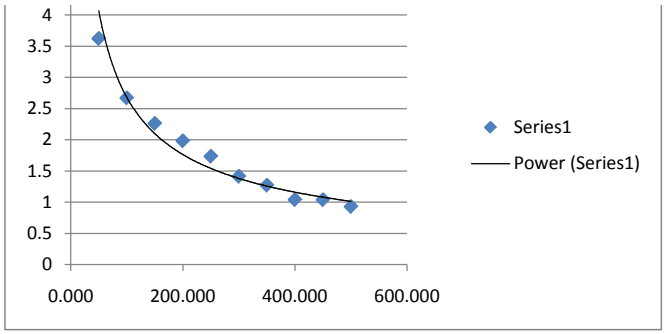
V1=s flag/t1 =0.025 m/0.1044s = 0.239 m/s
V2=s flag/t2
a=(v2^2-v1^2)/(2*s track)

Graphs: Acceleration vs Force and Acceleration vs Mass









Questions:

1. How does Force affect acc?
2. How does Added mass affect acc?
3. Try to make one statement with a, F, and m in it?

Conclusion:

Summary: