	A	B	C	D	E	F
1	Aidan Chin					
2	10/11/2023					
3	ECE 202 E1					
4	http://hyperphysics.phy-astr.gsu.edu/hbase/elacol2.html					
5	Aidan Carey					
6	This excel document calculates the final velocity of 2 carts in elatic collision					
7						
8	\/ fix these labels	Original Sim	m1 Change	m2 Change	v1i Change	v2i Change
9	**GIVENS**					
10	cart masses:					
11	m1 (g)	250	50	250	250	250
12	m2 (g)	150	150	500	150	150
13						
14	initial velocities:					
15	v1i (cm/s)	30	30	30	40	30
16	v2i (cm/s)	-40	-40	-40	-40	-60
17						
18	**CALCULATIONS**					
19	total mass:					
20	M (g)	400	200	750	400	400
21						
22	final velocities:					
23	v1f (cm/s)	-22.5	-75	-63.33333333	-20	-37.5
24	v2f (cm/s)	47.5	-5	6.666666667	60	52.5
25						
26	**CHECKS**					
27	momentum:					
28	Pi (N)	1500	-4500	-12500	4000	-1500
29	Pf (N)	1500	-4500	-12500	4000	-1500
30	checkMomentum	0	0	0	0	0
31	should add to zero ^					
32	energy:					
33	Ei (J)	232500	142500	512500	320000	382500
34	Ef (J)	232500	142500	512500	320000	382500
35	checkEnergy	0	0	0	0	0
36	should add to zero ^					