Aidan Chin
10/11/2023
ECE 202 E1
http://hyperphysics.phy-astr.gsu.edu/hbase/elacol2.html
Aidan Carey
This excel document calculates the final velocity of 2 carts in elatic collision

\/ fix these labels	Original Sim	m1 Change	m2 Change	v1i Change
GIVENS				
cart masses:				
m1	250	50	250	250
m2	150	150	500	150
masses of carts 1 & 2 in g				
initial velocities:				
v1i	30	30	30	40
v2i	-40	-40	-40	-40
velocities of carts 1 & 2 in cm/s				
CALCULATIONS				
total mass:				
M	400	200	750	400
total mass of both carts in g				
final velocities:				
v1f	-22.5	-75	-63.333333	-20
v2f	47.5	-5	6.66666667	60
final velocities of cart 1 & 2 in cm/s				
CHECKS				
momentum:				
Pi	1500	-4500	-12500	4000
Pf	1500	-4500	-12500	4000
checkMomentum	0	0	0	0
check concervation of momentum, should add to zero				
energy:				
Ei	232500	142500	512500	320000
Ef	232500	142500	512500	320000
checkEnergy	0	0	0	0

check concervation of energy, should add to zero

v2i Change

250
150

30
-60

400

-37.5
52.5

-1500
-1500
0

382500
382500
0