

#38

Physics Homework

Name _____

Date _____ Period _____



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1) Calculate the momentum of a proton with a mass of 1.67×10^{-27} moving with a velocity of 3.4×10^6 m/s.

2) Calculate the momentum of a bullet with a mass of 23g traveling with a velocity of 500.0m/s.

3) Find the force acting on the bullet in #2 if it comes to rest in 0.0035s when it hits the target.

4) A 4.3kg cart traveling at 2.3m/s north hits a stationary cart with a mass of 2.7kg. Find the final velocity of the two carts if they stick together.

5) A 13.3kg cart traveling at 1.3m/s north hits a cart with a mass of 7.7kg traveling south at 2.1m/s. Find the final velocity of the two carts if they stick together.