Physics 11 - Practice Questions

Unit: 5.1 Momentum Introduction

1. 1.0 kg object travelling at 5.0 m/s has what momentum?
2. A bullet travelling at 900 m/s has a momentum of 4.5 kg.m/s, what is it’s mass in grams?
3. What is the velocity of a 7.3g rock with a momentum of 22 kg.m/s?
4. A 80 kg cyclist speeds up from 20 km/hr to 25 km/hr; calculate the change in momentum.
5. A 60 g ball leaves a rocket at 55 m/s. It was in contact for 4.0 x 10-3 s. What is the average force on the ball? Could this force lift a 60 kg person?
6. Calculate the momentum of a 1000g duck moving at 28 m/s and a sumo wrestler with a mass of 200 kg, moving at 0.5 km/hr.