**Momentum Introduction Worksheet**

1. Calculate the momentum of a 5.0kg mass travelling at a velocity of 12.0m/s west.
2. A 2.4kg duck has a momentum of 24kgm/s to the south. What is the duck’s velocity?
3. A flying sweater has a velocity of 5.5m/s north and a momentum of 4.2Ns north. What is the sweater’s mass?
4. A 950kg car is speeding through the city at a velocity of 75km/h east. What is the momentum of the car?
5. A 17.3N watermelon is dropped from a roof. What is the momentum of the watermelon when it reaches a velocity of 15m/s?

1) 60kgm/s W 2) 10m/s S 3) 0.76kg 4) 19800kgm/s E 5) 26kgm/s down 6) 31.2kgm/s 7) 7.35kgm/s down 8) -0.768kgm/s 9)-11.5kgm/s

1. Andy, who now masses at 5.2kg, runs for all food. If he can travel 4.5m in 0.75s, what is the magnitude of his momentum?
2. A 0.5kg box of spanakopita is dropped from a roof. What is the momentum of the spanakopita after 1.5s?
3. A 0.12kg bouncy ball is thrown at the wall at a velocity of 3.2m/s. It bounces off with a velocity of -3.2m/s. What is the ball’s change in momentum?
4. Willow, who now masses at 3.2kg, is chasing the ball. She runs at the wall at a velocity of 3.2m/s, but only bounces off at velocity of -0.4m/s. What was Willow’s change in momentum?