Conservation of Momentum

1. A 200g golf club is going 40 m/s. After it strikes a 100g ball, it continues at 15 m/s. How fast in meters per second is the ball going?

2. Two skaters start at rest and push off from each other. The skater with a mass of 60kg is going 3m/s. The other skater has a mass of 90kg. How fast in meters per second is this other skater going?

3. A 450g golf club is going 40 m/s. After it strikes a 100g ball, it continues at 20 m/s. How fast in meters per second is the ball going?

4. Two skaters start at rest and push off from each other. The skater with a mass of 45kg is going 5m/s. The other skater has a mas of 90kg. How fast in meters per second is this other skater going?

Answers to part B

1. 100 m/s

2. 6 m/s

3. 80 m/s

4. 2 m/s

Conservation of Momentum

1. A 400g golf club is going 40 m/s. After it strikes an 100g ball, it continues at 15 m/s. How fast in meters per second is the ball going?

2. Two skaters start at rest and push off from each other. The skater with a mass of 60kg is going 4m/s. The other skater has a mass of 40kg. How fast in meters per second is this other skater going?

3. A 400g golf club is going 40 m/s. After it strikes a 100g ball, it continues at 20 m/s. How fast in meters per second is the ball going?

4. Two skaters start at rest and push off from each other. The skater with a mass of 40kg is going 3m/s. The other skater has a mass of 60kg. How fast in meters per second is this other skater going?

Answers to part A

1. 50m/s
2. 2m/s
3. 90m/s
4. 2.5m/s