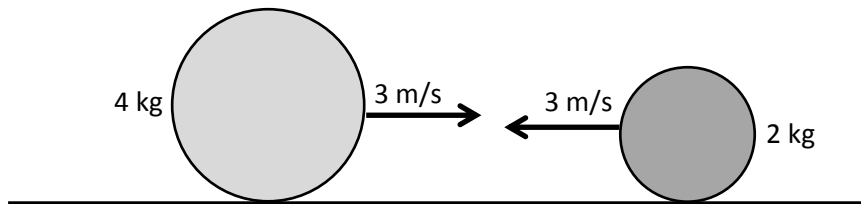


Year 11 Physics 2021 Worksheet 6

Write the answers in your Exercise Book.

A 4 kg mass is moving to the right at 3 m/s. A 2 kg mass is moving to the left at 3 m/s and the two masses collide.



- (a) State the **Law of Conservation of Momentum**. (1 mark)
- (b) Calculate the **momentum** of the 4 kg mass before the collision. (1 mark)
- (c) Calculate the **momentum** of the 2 kg mass before the collision. (1 mark)
- (d) Determine the **total momentum** before collision. (2 marks)
- (e) What is the **total momentum** after the collision? (1 mark)

The two masses stick together after the collision.

- (f) Find their **common velocity** after the collision. (1 mark)
- (g) Determine the **kinetic energy** lost in the collision. (2 marks)