1. Calculate the momentum of a 4.0 kg object traveling at a velocity of 12.0 m/s east.

2. A 5.0 kg object has a momentum of 25.0 kgm/s west. What is its velocity?

3. An object has a velocity of 8.0 m/s south and a momentum of 36.0 kgm/s south. What is its mass?

4. An object has a velocity of 2.0 m/s east and a momentum of 29 kgm/s. What is the weight of the object?

5. A 6.6 N object is traveling at a velocity of 3.0 m/s north. What is the object's momentum?

6. A 7.0 kg object travels 2.6 m west in 1.1 s. Assuming uniform velocity, what is the momentum of the object?

7. A 5.0 kg object is dropped from a height of 2.5 m above the floor. What is the object's momentum after 0.25 s?

8. A 1.0 kg ball hits the floor with a velocity of 2.0 m/s. If the ball bounces up with a velocity of 1.6 m/s, what is the ball's change in momentum?

9. A 0.144 kg baseball is pitched horizontally at + 38 m/s. The batter hits a horizontal line drive at – 38 m/s (the opposite direction!). What is the ball's change in momentum?

10. The 1205 kg physics dragster is traveling at 35 km/h east when it hits the gas and accelerates at 12.5 m/s^2 for 3.25 s. What is its change in momentum during this time?

1) 48 kgm/s E 2) 5.0 m/s W 3) 4.5 kg 4) 140 N 5) 2.0 kgm/s 6) 17 kgm/s 7) -12 kgm/s 8) 3.6 kgm/s 9) -11 kg m/s 10) 49 000 kgm/s