

Solutions

Each answer shows the steps, then the **result**.

2.1

- It keeps moving at constant velocity in a straight line

2.2

- Inertia is an object's resistance to a change in its motion

2.3

- Zero (it is in equilibrium)

2.4

- The 10 kg ball (more mass, more inertia)

3.1 C

- constant velocity means zero net force

3.2 B

- inertia depends on mass

3.3

(a)

- Zero

(b)

- Weight (down) and the upward lift/thrust (up)

3.4

(a)

- The passenger's inertia keeps them moving forward while the bus decelerates beneath them

(b)

- No — no forward force acts; it is the absence of one