

1. If a car is traveling westward with a constant velocity of 20 m/s, what is the net force acting on the car?
2. If a car is accelerating downhill under a net force of 3674 N, what additional force would cause the car to have a constant velocity?
3. The sensor in the torso of a crash-test dummy records the magnitude and direction of the net force acting on the dummy. If the dummy is thrown forward with a force of 130.0 N while simultaneously being hit from the side with a force of 4500.0 N, what force will the sensor report?
4. What force will the seat belt have to exert on the dummy in item 3 to hold the dummy in the seat?
5. **Critical Thinking** Can an object be in equilibrium if only one force acts on the object?