

Assignment: newton

- 1 A person is standing on a bathroom scale in an elevator car. If the scale reads a value greater than the weight of the person at rest, the elevator car could be moving
 - 1 downward at constant speed
 - 2 upward at constant speed
 - 3 downward at increasing speed
 - 4 upward at increasing speed

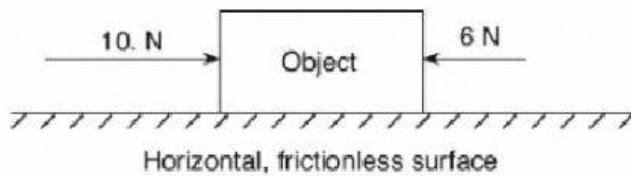
- 2 A man standing on a scale in an elevator notices that the scale reads 30 newtons greater than his normal weight. Which type of movement of the elevator could cause this greater-than-normal reading?
 - 1 accelerating upward
 - 2 accelerating downward
 - 3 moving upward at constant speed
 - 4 moving downward at constant speed

- 3 A man weighs 900 newtons standing on a scale in a stationary elevator. If some time later the reading on the scale is 1200 newtons, the elevator must be moving with
 - 1 constant acceleration downward
 - 2 constant speed downward
 - 3 constant acceleration upward
 - 4 constant speed upward

- 4 A student weighing 500. newtons stands on a spring scale in an elevator. If the scale reads 520. newtons, the elevator must be
 - 1 accelerating upward
 - 2 accelerating downward
 - 3 moving upward at constant speed
 - 4 moving downward at constant speed

- 5 A student is standing in an elevator that travels from the first floor to the tenth floor of a building. The student exerts the greatest force on the floor of the elevator when the elevator is
 - 1 accelerating upward as it leaves the first floor
 - 2 slowing down as it approaches the tenth floor
 - 3 moving upward at constant speed
 - 4 at rest on the first floor

- 6 Two forces act concurrently on an object on a horizontal, frictionless surface, as shown in the diagram below.



What additional force, when applied to the object, will establish equilibrium?

- 1 16 N toward the right
 - 2 16 N toward the left
 - 3 4 N toward the right
 - 4 4 N toward the left
- 7 Which body is in equilibrium?
- 1 a satellite moving around Earth in a circular orbit
 - 2 a cart rolling down a frictionless incline
 - 3 an apple falling freely toward the surface of Earth
 - 4 a block sliding at constant velocity across a tabletop
- 8 Which body is in equilibrium?
- 1 a satellite orbiting Earth in a circular orbit
 - 2 a ball falling freely toward the surface of Earth
 - 3 a car moving with a constant speed along a straight, level road
 - 4 a projectile at the highest point in its trajectory
- 9 If the sum of all the forces acting on a moving object is zero, the object will
- 1 slow down and stop
 - 2 change the direction of its motion
 - 3 accelerate uniformly
 - 4 continue moving with constant velocity