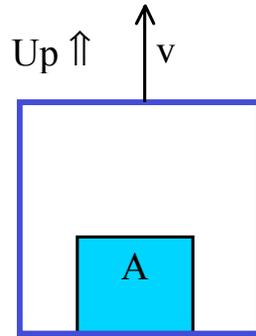
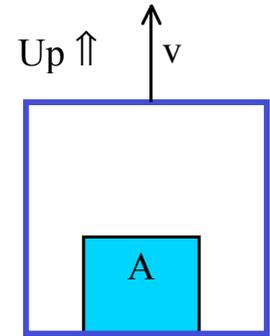


A box is sitting on the floor of an elevator which is moving up at a constant speed, v . The box has mass M_A . Which of the following is true?



- 1) Kinetic energy is being converted into gravitational potential energy.
- 2) The normal force does work on the box, creating gravitational potential energy.
- 3) The cable pulling up the elevator does work on the box, creating gravitational potential energy.
- 4) The normal force must be larger than $M_A g$ in order to overcome gravity and create the upward energy.
- 5) The box has constant speed so its total mechanical energy is a constant.
- 6) More than one of the above.
- 7) None of the above.

You lift a ball at constant velocity from a height h to a greater height H . If you consider the ball to be the system, which of the following statements is true?



- 1) The potential energy of the system increases.
- 2) The kinetic energy of the system decreases.
- 3) The earth does negative work on the system.
- 4) You do negative work on the system.
- 5) Two of the above are true.
- 6) Three of the above are true.
- 7) All of the above are true.
- 8) None of the above are true.