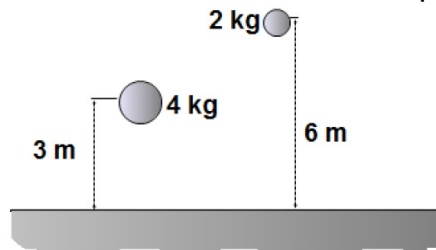
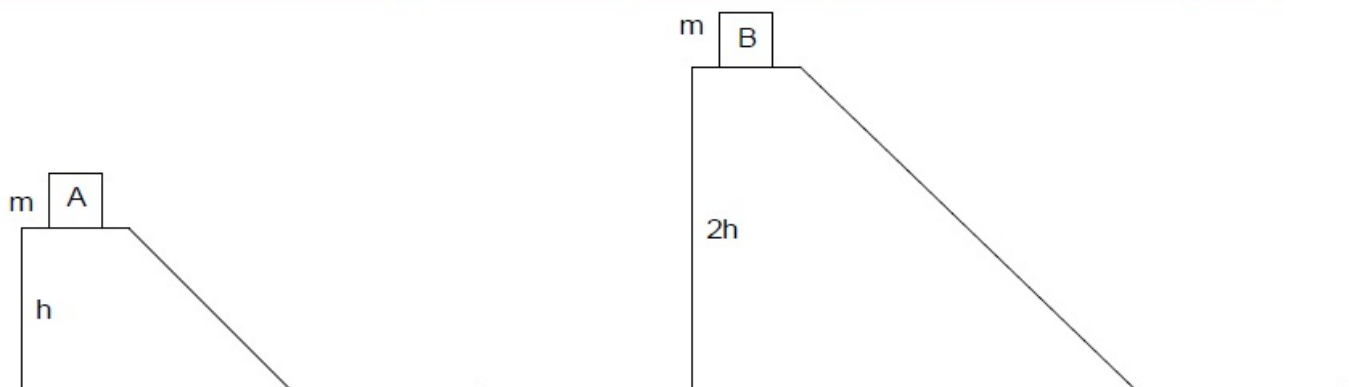


7. An object I with a mass of 4 kg is lifted vertically 3 m from the ground level; another object II with a mass of 2 kg is lifted 6 m up.



Which of the following statements is true?

- I. Object I has greater potential energy since it is heavier
 - II. Object II has greater potential energy since it is lifted to a higher position
 - III. Two objects have the same potential energy
- (A) I
 (B) II
 (C) III
 (D) I and II
8. A 2.00 kg cat is on a table 1.00 m above the floor. It jumps up on a shelf 2.00 m above the table. What is the gravitational potential energy of the cat with respect to the floor?
- (A) 19.6 J
 (B) 39.2 J
 (C) 58.9 J
 (D) 78.4 J
9. The picture below shows two identical blocks A and B, each with mass m , resting at the top of two hills. How does the gravitational potential energy of each block compare?



- (A) $(E_g)_A = \frac{1}{2}(E_g)_B$
 (B) $(E_g)_A = (E_g)_B$
 (C) $(E_g)_A = \sqrt{2}(E_g)_B$
 (D) $(E_g)_A = 2(E_g)_B$