

Question#19434

a pingpong ball and a golf ball are dropped in a vacuum chamber from the same height and at the same time. When they have fallen halfway, they have the same

- a. Potential energy
- b. Kinetic energy
- c. Acceleration
- d. Velocity

Answer:

Such as ping-pong ball and a golf ball have a different mass.

The potential and energy depend from the mass:

$$E_p = \mathbf{m} \cdot g \cdot H$$

$$E_k = \frac{1}{2} \mathbf{m} \cdot v^2$$

In a vacuum the acceleration of free falling does not depend from the mass and follow this acceleration and velocity is equal for all bodies.

$$g = 9.8 \text{ m/s}^2$$

$$v = gt$$

Answers "C" and "D".