

Homework

②(4) The gain of gravitational potential energy is 9.8 joules.

② Given, that the ball is dropped from a height,
 $h_1 = 10\text{ m}$

$$\text{PE at } h_1 = mgh_1$$

Given, $g = 10 \text{ m/s}^2$, $h_1 = 10 \text{ m}$.

Therefore, the PE at $h_1 = m \times 10 \times 10 = 100 \text{ mJ}$.

On striking the ground level, the ball loses 40% of its initial energy i.e., $(40/100) \times 100 \text{ mJ} = 40 \text{ mJ}$.

Energy left on striking the ground = $100 \text{ mJ} - 40 \text{ mJ} = 60 \text{ mJ}$

So, the final energy of the ball, $mgh_2 = 60 \text{ mJ}$

$$\text{i.e.; } h_2 = \left(\frac{60}{10} \right) = \underline{\underline{6 \text{ m}}}$$

Therefore, the ball will bounce back to a height of 6m.

(2)

(2) 1:3

(4)

(4) lie down on the ground.

(5)

(4) mgh .

(6)

(1) 100%

(7)

(4) I doesn't imply & but & implies I.

→ X →