Answer on Question 62206, Physics – Mechanics | Relativity

Question:

A ball thrown vertically up from ground level with an initial velocity of 5 ms^{-1}. What is the maximum height it attains?

Solution:

We can find the maximum height of the ball from the Law of Conservation of Energy (the kinetic energy of the ball at the ground level becomes the potential energy at the maximum height):

$$PE = KE,$$

$$mgh = \frac{1}{2}mv_0^2,$$

$$h = \frac{v_0^2}{2g} = \frac{(5\ ms^{-1})^2}{2 \cdot 9.8\ ms^{-2}} = 1.27\ m.$$

Answer:

$h = 1.27\ m$.S