Answer on Question #71031, Physics – Mechanics – Relativity

At what velocity (m/s) must a 28.7 kg object be moving in order to possess a kinetic energy of 1.03 J?

Solution

$E_{kin} = \frac{mv^2}{2}$

$v = \sqrt{\frac{2E_{kin}}{m}}$

$v = \sqrt{\frac{2 \times 1.03}{28.7}} = 0.268$ (m/s)

Answer

28.7 kg object must move at **0.268 m/s** in order to possess a kinetic energy of 1.03 J.