Answer on Question #58140-Physics-Mechanics-Relativity

A 5.00-kg object is moving at a constant speed of 8.00 m/s on a horizontal surface. What is the kinetic energy of the car?

Solution

The kinetic energy of the car is given by the formula:

$$K = \frac{mv^2}{2},$$

where m is the mass of the car and v is the speed of the car.

$$K = \frac{5.00 \text{ kg} \cdot \left(8.00\frac{\text{m}}{\text{s}}\right)^2}{2} = 160 \, J.$$

Answer: 160 J.