Answer on Question 67780, Physics, Mechanics, Relativity

Question:

A car is traveling $90\ km/h$ at night. The motorist spots a deer on the road $55\ m$ in front of the car. If the speed and direction of the car remains the same, how long will it take for the car to reach the deer's position?

Solution:

Let's first convert km/h to m/s:

$$v = 90\ \frac{km}{h} \cdot \frac{1000\ m}{1\ km} \cdot \frac{1\ h}{3600\ s} = 25\ \frac{m}{s}.$$

Then, we can find the time that needs the car to reach the deer's position from the formula:

$$t = \frac{s}{v} = \frac{55\ m}{25\ \frac{m}{s}} = 2.2\ s.$$

Answer:

$t = 2.2\ s.$