Answer on Question #63244, Physics / Mechanics | Relativity

Imagine that you are in a car, driving along a main road. Along the road, there are sign telling you how far it is to the next town. At the road side, there may be marker posts every 100 meters. Describe how you could use these road signs to work out the average speed of the car

Solution:

Average speed v:

$v = \frac{s}{t}$ (1),

where s is all distance in meters, t is all time in seconds.

Of (1) $\Rightarrow$ average speed of the car:

$v = \frac{100+100+\cdots+100}{t_1+t_2+\cdots+t_n}$ (2),

where t_1 is time in seconds, during which the car passes the first 100 m, t_2 is time in seconds, during which the car passes the second 100 m, t_n is time in seconds, during which the car passes the latest 100 m.