

GPS Event Tracking

Speed and velocity are different. Speed describes how fast an object is moving while velocity is the rate at which an object changes its position. In other words velocity takes into account the information about direction of the object. This activity focuses on the travel velocity of the robot.

Helper's Guide

How to Prepare

Solution for before you start problem-

Average speed on first day = Distance/ Time

$$\begin{aligned} &= 5 / 0.2 \text{ (note 12 min = 0.2 hrs)} \\ &= 25 \text{ miles/hr} \end{aligned}$$

Next day the average speed = 10 miles/hr for 5 miles

Time for next day trip = 5/10

$$= 0.5 \text{ hrs which is 30 minutes.}$$

So Julie took 18 minutes (30- 12 minutes) more to reach school the next day.

While doing this activity note how speed and heading changes dramatically at corners of the square shape pattern.

Use the example data given incase of bad weather.

Need to Emphasize

- Speed is the distance travelled by an object in a certain amount of time. Speed is a scalar quantity.
- Velocity is a measurement of speed and direction. Velocity is a vector quantity.

Related Links

- <http://www.glenbrook.k12.il.us/GBSSCI/PHYS/CLASS/1DKin/U1L1d.html>
 - <http://regentsprep.org/Regents/physics/phys01/velocity/default.htm>
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*Viacheslav Adamchuk and Shana Thomas
Phone: 402-472-8431
E-mail: vadamchuk2@unl.edu
Last updated: March 5, 2008*