The 1D velocity is defined as \( v = \frac{dx}{dt} \)

What is true about this velocity?

A. It is always positive.
B. It is only negative if \( x \) is negative.
C. It can be positive or negative but only for positive \( x \).
D. It can be positive or negative for both positive and negative \( x \).
You have already traveled east in your car 100 km in 1 hr and then south 100 km in 2 hrs. To get back home, you then drive west 100 km for 3 hours and then go north 100 km in 4 hours. You would say your average velocity for the total trip was

A. 20 km/hr
B. 40 km/hr
C. 60 km/hr
D. 100 km/hr
E. None of the above
You have already traveled east in your car 100 km in 1 hr and then south 100 km in 2 hrs. To get back home, you then drive west 100 km for 3 hours and then go north 100 km in 4 hours. You would say your average speed for the total trip was

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