OPEN RESPONSE: D MOTION & FORCES

A person is driving his car to a store. The store is 800 m north of the person's starting point. After traveling north 1200 m, the person realizes that he has passed the store. He turns the car around and drives back to the store. Altogether, the trip to the store takes 100 s.

a. Determine the distance traveled by the car on this trip to the store. Show your calculations and include units in your answer.
b. Calculate the average speed of the car on this trip. Show your calculations and include units in your answer.
c. Determine the displacement of the car for this trip. Include units in your answer.
d. Calculate the average velocity of the car upon arrival at the store. Show your calculations and include units in your answer.