Name	Date	(7-2)
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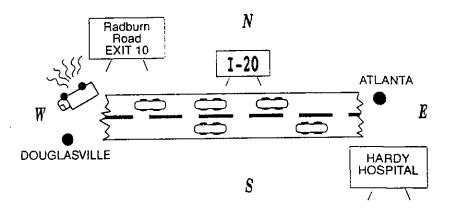
SOLVING YOUR PROBLEMS IN MOTION Activity on the Energy of Motion

Directions

Use the information and formulas discussed in the content of *Let's Get Movin'* to solve the following motion problems. Please show your work for each problem in addition to the final answer. If you need additional room for your computations, you may use the back of the worksheet.

I. Read the information below and consult the map to answer the following questions about this paragraph:

Joe works for the Emergency Medical Technician (EMT) team in Atlanta. He is often called on to use his superior driving skills when rushing to the scene of an accident and then delivering the patient back to Hardy Hospital in Atlanta. On May 14, Joe received a call that a car collision had occurred on Radburn Road in Douglasville. Joe knew he must cover the 25-mile distance in as little time as possible. He jumped into his car at 10:00 P.M. and arrived at the scene of the accident at 10:15 P.M. He spent from 10:15 to 11:00 P.M. getting the patient ready to transport. At 11:00 P.M., Joe jumped into his EMT vehicle and started back toward Atlanta with his patient. As he started the engine to leave the scene of the accident, he went from 0 to 60 miles per hour in 2.5 seconds. He had almost made it back to the hospital when a green Volkswagen darted in front of him. Joe slammed on the brakes and went from his 120-mile-per-hour speed to stop in 4 seconds, barely avoiding an accident. Finally at 11:20, Joe arrived safely at Hardy Hospital with his patient.



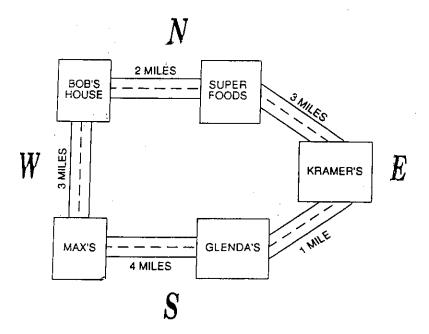
Questions

- 1. Give the speed of the trip from Atlanta to Douglasville in (A) miles/min, and (B) miles/hour.
- 2. Give the speed of the trip from Douglasville back to Atlanta in (A) miles/min, and (B) miles/hour.

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Solving Your Problems in Motion (continued)

- 3. Give the velocity of the trip from Hardy Hospital in Atlanta to Douglasville in miles per hour (be sure to include both magnitude and direction).
- . 4. Give the velocity of the trip from Douglasville back to Hardy Hospital in miles/hour (be sure to include magnitude and direction).
- 5. Give Joe's acceleration in that 2.5-second period when he started from the scene of the accident in Douglasville. Give your answer in (A) miles/hour², and (B) miles/sec².
- 6. Give Joe's deceleration as he slowed to avert the accident with the Volkswagen as he returned to the hospital. Give the answer in miles/hour².
 - II. Look at the drawing below and answer the following questions:



Information: Bob leaves home at 9:00 A.M. to run some errands on his bike. He goes directly from his house to Super Foods to pick up some jelly beans. He leaves Super Foods and travels to Kramer's to return some plastic bags for recycling which he received on his last shopping trip. He goes directly from Kramer's to Glenda's clothing store to pick up some black socks. And finally he leaves Glenda's and goes directly to Max's. He arrives at Max's at 11:00 A.M. Now answer the following questions as you look at the map above.

- 7. Give the distance Bob traveled.
- 8. Give the displacement of Bob's journey.
- 9. Give the average speed of Bob's trip in miles/hour.
- 10. Give the velocity of Bob's trip in miles/hour (be sure to include both magnitude and direction).