

At the start of Spring Break, a friend, in a Chevy Corvette, picks you up at NSCC and you are off on a non-stop road trip driving all day and night, swapping sleep and driving until you reach the sunny beaches of Los Angeles (L.A.). Before falling asleep, you start a log of the time and odometer mileage between gas stops:

City	Time	Odometer
Nashville	10:00 a.m.	76180
Little Rock, AR	3:20 p.m.	76532
Oklahoma City, OK	8:30 p.m.	76873

1. Make a graph with odometer mileage the vertical axis, and time the horizontal axis. Make Nashville the starting point. Make 76000 miles the zero on the vertical axis. Label the axes, and plot the points in the table. Connect the points and extend the line across both axes.
2. What is your average speed over the entire trip?
3. Write a formula for your trip that inputs hours traveled and outputs odometer mileage: $MILES = f(\text{hours})$
4. Use your formula to find the odometer reading at midnight? How far have you driven by midnight? Are we there yet? What state are you in?
5. The odometer reads 78200 miles when you arrive in L.A. How many hours did you drive? How far did you drive? What time was it when you arrived?
6. Assuming your constant rate of speed, how far will you travel in 1 minute?
7. Assuming your constant rate of speed, how long does it take to drive 1 mile?
8. If your friend left from Knoxville, and drove at the same rate that you averaged during the entire trip, what time did your friend leave Knoxville? Use your formula to compute this point. Then plot the point on your graph.
9. If you filled up the Corvette's 18 gallon tank in Nashville, and were on empty in Little Rock, how many miles per gallon did you average?
10. If the average gas price across the country was \$2.60 per gallon during your trip, estimate approximately the total cost of gas for the trip to L.A. and back? Would it have been cheaper to fly?